

THE INFLUENCE OF SPACE CHARACTERISTICS ON THE
PREFERENCE OF CAFES AS WORKPLACES

The Graduate School of Economics and Social Science
of

İhsan Doğramacı Bilkent University

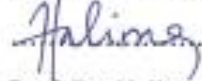
by

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I certify that I have read this thesis and have found that it is fully adequate, in scope and in quality, as a thesis for the degree of Master of Fine Arts in Interior Architecture and Environmental Design.

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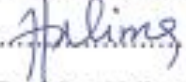
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ABSTRACT

THE INFLUENCE OF SPACE CHARACTERISTICS ON THE PREFERENCE OF CAFES AS WORKPLACES

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This study explores the impacts of physical space, social space and ambiance characteristics of café environments on the preference as workplaces. A field study approach is used in this study and conducted with 134 participants who were studying at a café. Among cafés in Ankara, six cafés were selected as the case study to evaluate the influence of the physical space, social space and ambiance characteristics on the preference of cafes as workplaces. According to the results, the findings indicated that the productivity level, physical view, cleanliness level, security level, socialization level, and ambiance noise level have a positive effect on the preference of cafés as workplaces.

Keywords: Ambiance, Café, Physical Space, Preference, Social Space

ÖZET

MEKAN KAREKTERLERİNİN, KAFELERİ ÇALIŞMA ALANI OLARAK KULLANMAYI SEÇMEDEKİ ETKİSİ

Özgüner, Ebru

Yüksek Lisans, İç Mimarlık ve Çevre Tasarımı Bölümü

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Bu çalışma fiziksel, sosyal ve atmosferik mekan karakterlerinin, kafeleri çalışma alanı olarak kullanmayı seçmedeki etkisini araştırmaktadır. Alan araştırması yaklaşımıyla, seçilen kafelerde ders çalışan ya da işini yürüten 134 denekle bu çalışma gerçekleştirilmiştir. Fiziksel, sosyal ve atmosferik mekan karakterlerinin kafeleri çalışma alanı olarak kullanmayı seçmedeki etkisini araştırmak için Ankara'daki altı kafe seçilmiştir. Çalışmanın sonuçlarıncı, mekanlardaki üretkenlik hissi, fiziksel görüntü, temiz oluşu, güvenli oluşu, sosyalleşme seviyesi ve atmosferik ses seviyesi kafeleri çalışma alanı olarak seçmedeki pozitif bir etki oluşturduğu görülmüştür.

Anahtar Kelimeler: Atmosfer, Fiziksel Alan, Kafe, Sosyal Alan, Tercih

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TABLE OF CONTENTS

ABSTRACT	iii
ÖZET	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	vii
LIST OF FIGURES	viii
CHAPTER I: INTRODUCTION	1
1.1. Aim of the Study	3
1.2. Structure of the Thesis	4
CHAPTER II: CAFÉS	5
2.1. Café in History	5
2.2. Cafés as Gathering Places	8
2.3. Cafés as a Workplace	11
2.4. Cafés as a Studying Place	14
CHAPTER III: SPACE CHARACTERISTICS OF CAFÉS	17
3.1. Physical Space Characteristics	17
3.2. Social Space Characteristics	20
3.3. Ambiance Characteristics	22
CHAPTER IV: METHODOLOGY	28
4.1. Problem Statement	28
4.1.1. Research Questions	29
4.1.2. Hypotheses	29
4.2. Method of the Study	30
4.2.1. Conceptual Framework of the Study	30
4.2.2. Instruments of the Study	32
4.2.3. Participants of the Study	32
4.2.4. Setting of the Study	33
CHAPTER V: RESULTS	38
5.1. Demographic Characteristics	38
5.2. Comparison of Importance Given by the Customer and Suitability of Café Space.....	40
5.3. Priority of Spaces	46
5.4. Place Rating Level, Satisfaction Level, Recommendation Level	46
5.5. Association of Physical, Social Space and Ambiance Characteristics with Customer's Ratings	50
5.5.1. Between Café Characteristics and Place Rating Level	50
5.5.2. Between Café Characteristics and Satisfaction Level	51
5.5.3. Between Café Characteristics and Recommendation Level.....	53

5.6. The Relationship between Physical, Social Space and Ambience	
Characteristics with Customer's Ratings.....	55
5.6.1. Between the Physical Space, Social Space and Ambiance Characteristics	
and Place Rating Level	55
5.6.2. Between the Physical Space, Social Space and Ambiance Characteristics	
and Satisfaction Level	57
5.6.3. Between the Physical Space, Social Space and Ambiance Characteristics	
and Recommendation Level	59
CHAPTER VI: DISCUSSION AND CONCLUSION	63
6.1. Discussion	63
6.2. Conclusion	69
BIBLIOGRAPHY	71
APPENDICES	80
A. QUESTIONNAIRE/ANKET	81
B. STATISTICAL ANALYSIS	89

LIST OF TABLES

Table 1: Summary of Space Characteristics.....	27
Table 2: Stages and instruments of the study.....	31
Table 3: Demographic characteristics of the participants of the study.....	38
Table 4: Given Importance by Customers and Suitability of the Space Characteristics.....	41
Table 5: Paired Samples t-Tests for Physical Space Characteristics.....	43
Table 6: Paired Samples t-Test for Social Space Characteristics.....	44
Table 7: Paired samples t-Test for Ambiance Characteristics.....	45
Table 8: Importance level of physical space, social space and ambiance.....	46
Table 9: Chi-square test for independence – Place Rating Level versus Space Characteristics.....	51
Table 10: Chi-Square test for independence – Satisfaction Level versus Space Characteristics.....	52
Table 11: Chi-Square test for independence – Recommendation Level versus Space Characteristics.....	54
Table 12: Multiple regression of independent variables against place rating level...	56
Table 13: Multiple regression of independent variables against satisfaction level....	58
Table 14: Multiple regression of independent variables against recommendation level.....	61

LIST OF FIGURES

Figure 1: Conceptual framework of the study.....	30
Figure 2: Location of the Cafés.....	33
Figure 3: Aylak Madam Café	34
Figure 4: Nadjima Café	35
Figure 5: Sakal Café	35
Figure 6: Ardiç Café	36
Figure 7: Café des Cafés.. ..	36
Figure 8. Visiting frequency of the participants.....	39
Figure 9. Place rating level in particular cafés.....	47
Figure 10. Satisfaction level in particular cafés.....	48
Figure 11. Recommendation Level in particular cafés.....	49

CHAPTER I

INTRODUCTION

Today, with the increasing number of preference of public-spaces as a workplace is more than a hobby, it is a life style. Working together in one place like an office environment is seen desperate and dated. Because, today, people want to be more social and productive. Anjum, Paul, and Ashcroft (2005) enhanced this idea with “The idea that workers must work together in one place is now outmoded and many organizations promote mobility of their workforce to facilitate communication of knowledge” (Anjum, Paul and Ashcroft, 2005; p. 74). Previous theoretical and experimental studies in environmental psychology proposed that physical environment is an essential element for evoking user’s desire to do their work in public-spaces. It might be their desire to make their social status more alive or it might be about their feeling of productive. However, today so many people use public-spaces as their workplace and it is improving day by day. In previous studies, it is seen that physical environment is studied mostly but there are much more of that.

It is not just a physical environment, but a social environment and ambiance are essential elements for this issue as well. In this respect, this study includes a research about physical space, social space and ambiance characteristics of cafés.

There is a very limited number of study on this subject. However, this study intends to evaluate the influence of physical space, social space and ambiance characteristics on customers' preference of café as a workplace or studying place.



In past, the situation was always using the offices as a workplace. People were going to their offices to work from their homes in the morning until the evening comes. This was so much routine for people that is why today it becomes to change and people started to go public-spaces and do their work in these places. One of these places is café environment and this thesis will try to explore cafés as a workplace or studying place.

1.1.Aim of the Study

The interaction between the user and the physical space, social space and ambiance are unavoidable and spontaneous. This interaction can evoke positive or negative effects on customers' preference of café environment as a workplace.

A café interior design should consider all the dimensions of an environment for a user to function appropriately as well as has a positive effect on their job concentration.

Previous studies in environmental psychology, there is a term which is 'third place'. Oldenburg (1999) defined 'third places' as "these places are not home or work, but the places that help get people through the day" (Oldenburg, 1999, p. 56). Therefore, the physical space, social space and ambiance characteristics, possessed by café environment are explored in this study, to explore what characteristics are influential on customers' preference of a café as a workplace.

This thesis is different from the previous studies because there is not any research about physical, social and ambiance dimensions of cafés as a workplace. Also, there is not any study on why people want to use cafés as a workplace or studying place. The aim of this study is to answer these issues and make an exploration of what is the reason of people work in public-spaces as a café.

1.2. Structure of the Thesis

The primary purpose of this study is to determine the characteristics of physical space, social space, and ambiance at a regular café environment. To achieve this purpose, Chapter II of the study presents a brief review of the literature. Chapter III named “Spaces of Café” proposed different interior design effects. Chapter IV is named “Empirical Study” and provides some explanations about participants, setting, and instruments of the study. The survey is conducted with the customers of six similar cafés. The results are presented in Chapter V. In addition, the findings, the relation between the satisfaction, recommendation and place rating of customers and café environment are explained in this chapter of the study. Chapter VI includes the conclusion, limitations of the study and discusses the future suggestions areas.

CHAPTER II

CAFÉS

2.1. Cafés in History

Today cafés are important components of social life. As Grafe (2007) stated, “what café could offer was sociability, it is not only about meeting other people but also presenting themselves as public personae” (Grafe, 2007, p. 7). Therefore, there is an increase in the number of café types and café design styles. The major café typologies include the coffee house, coffee shop, and café.

The coffee house, since around 1654 exist in public life. By the 1660s, coffee houses were one of the essential components of daily life, especially in England. From those times to today, the significance level of coffee houses in social life increased day by day. In early years, many coffee houses embodied a domestic design styles like the new expectations of the home environment, renovated home decorations, etc. However, Bernson (2011) said “despite being domestic in appearance and locale, the functional design of the coffee house was highly specialized and pragmatic” (Bernson, 2011; p. 26). Bernson (2011) continues with “the English coffee house was defined functionally by its communal seating arrangements” (Bernson, 2011, p. 26). In this context, coffee houses had a large central room which has large communal tables. Coffee houses were not identified with the intellectual environment instead people conduct their business in these places, there were more privatized seating arrangements.

The Coffee Shop / Lounge, The modern coffee shop, or as Grafe (2007) mentions to it, “The ‘coffee lounge’, or ‘café’ and even ‘coffee house’, includes both of form and function” (Grafe, 2007). However, “when ‘café’ and ‘coffee house’ are terms that describe social relationships first, and a procurement of products second whereas ‘coffee shop’ is a term that describes procurement of products first, and individualized social relationships second such as Starbucks” (Grafe, 2007, p. 10). Starbucks is the main conclusion of today’s needs such as function is the most important factor in Starbucks design. The self-service is the main reason of the formality and informality at the same time in the space. Because of the rigidity of the customers’ behavior when giving an order is more formal. For example, in Starbucks, the relationship between customer and worker becomes more formal because there is a separation wall between them when ordering instead of face to face interaction when it is table service. However, after taking the coffee customers can do anything that they want in the shop. For instance, they can listen to music from their laptops without headphones or they can go after finish their coffee without leaving a tip. The similarities and differences between Starbucks and regular cafés will be analyzed in the next chapters.

The café, developed in 18th century Paris. This type of retail space was established a difference between production and leisure. “These social changes are directly related to the much more pronounced informality and overlap of public and private spheres in the café as compared to the English coffee house (Grafe, 2007, p. 11).” In fact, the Parisian café was produced out of a combination of the English coffee house and French restaurant and bistro styles.

Today most cafés are also known as a ‘pub’ because there is service of coffee as well as service of alcohol. These pubs are serving breakfast in the morning, lunch at noon and dinner in the evening also serving coffee, tea but also alcohol as well. Therefore, cafés still have an often large, usually purpose built space, with indoor as well as outdoor seating area, that combined the coffee and newspapers also alcohol and simple food. “The greater flexibility and openness of the café created a more informal atmosphere compared to the coffee house” (Bernson, 2011). Also, cafés have usually two to eight person tables in different zones, whereas coffeehouses have only large central tables.

Coffeehouses and cafés are different also because of interior design. Coffeehouses have mostly functional design and modern capitalist style in interior design. On the other hand, cafés have mostly homey, artistic and intellectual style of design. Many cafés imitated home appearance, like a living room by all decorations and furnishings, in these process. Started with the Parisian cafés, great range of decorative style in cafés fit their spatial informality. Also in the café environment, because there is usually a bar counter, customers can stand there and can talk to barista or barmen while consuming their beverages. Therefore, it allows people to socialize easily with the barista or other customers. In addition, as Bernson (2011) stated that “At all times of the day one could find the bohemians, students, artists, intellectuals and the other traditional habitués working and socializing in their favorite café haunts” (Bernson, 2011, p. 35). He means with that, people can be in café freely without their status and socialized. They can gather, work or study in the café environment.

2.2. Cafés as Gathering Places

Cafés are no longer just cafés. In these days, people prefer to go to cafes work or study in there and these activities are increasing day by day. In his book, 'The Great Good Place', author Ray Oldenburg (1999) emphasized "the importance of neighborhood gathering places in upgrading the quality of the lives of people". Oldenburg (1999) defined these gathering places as 'third places', and in order to explain that he stated: "these places are not home or work, but the places that help get people through the day". Oldenburg (1999) defined the third place as "a generic designation for a great variety of public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work" (p. 16). People do their business in cafés because these places are neither their home nor their workplace but a combination of these places and they are happy to spend their time in cafés. Oldenburg (1999) stated that "a third place is a crucial place for every people especially for workers". They can hang out, eat, drink and do their job in a playful mood in a café. Also, "The third place is just so much space unless the right people are there to make it come alive, and they are the regulars," said Oldenburg (1999, p. 33). Third places are informal gathering places in which people gather between home and work. In his work, Oldenburg (1999) writes, "Individuals who start their day in a friendly coffee circle will never have a totally bad day and have already developed a degree of immunity from the mean-spirited and unhappy people that the second place often harbors" (p. 35). In today's world, there is a need for third places because people are getting lost public communication day by day because they are always at work or home.

There is no doubt that the role of the third place in our lives is so valuable, and there is a lot of power there. Moreover, Habermas (1989) already indicated the role of public and semi-public places, such as cafés, in the development of a public communication for cultural improvement. Therefore, third places are obviously so important for communities in order to both work and rest in there. According to Oldenburg (1999),

- “semi-public spaces nourish relationships and a diversity of social ties,
- they help create a sense of place and community,
- they invoke a sense of civic pride,
- they provide numerous opportunities for serendipity,
- they promote companionship,
- they allow people to relax and unwind after a long day at work,
- they are socially binding,
- they encourage-age sociability instead of isolation, and
- they enrich public life and democracy” (p. 47).

Accordingly, the significance of public and semi-public places was seen obviously a long time ago. Especially, public places such as cafés are used as a workplace and there are some studies about that. For example, in her work Sayers (2009) mentioned ten major reasons that explain why people use cafés for work. She said “Our thematic analysis derived ten major themes. From this list of themes, she generated an acronym ‘FLAT WHITES’ (an espresso based coffee beverage) to explain why people use cafés for work. These letters stand for F(Formality/Informality), L(Leisure), A(Aesthetic),

T(Time), W(Workstation), H(Hospitality), I(Innovate), T(Transaction), E(Escape), S(Social)” (Sayers, 2009, p.79).

By Formality/Informality, Sayers (2009) means that people go and work in cafés without their status and in this way people feel relaxed. Leisure indicates that, when people go to a café to work, they can combine work and non-work activities easily. Also aesthetic includes design style, the age profile of the café or type of service. By Time Sayers (2009) means that people manage their time more effectively when they work in a café. Sayers (2009) also refers cafés to workstations, because people use cafés as a workstation for close to the actual work place or they choose to work in a café to use the facilities. Another factor is ‘Hospitality’ which means that food and drink have a significant role to play in organizational life and people feel good when they are working somebody serve them. Cafés provide an environment to ‘Innovate’ something, these places provide productivity. ‘Transaction’ means that, people use cafés to meet others to conduct a business transaction, networking and to engage two or more people in purposeful activity. When Sayers (2009) refer to ‘Escape’, she means that people work in cafés because they want to be far away from their actual workplaces, but at the same time want to do their work. Finally ‘Social’ indicates that people use cafés to work in order to socialize when they are working (Sayers, 2009).

As mentioned above, people prefer to work in cafés for lots of reasons. Cafés have a crucial role for workers, who are mobile or home based, as resting and working places.

This is because people want to be in and do their business in somewhere except home or work.

2.3. Cafés as a Workplace

“Cafés are accepted as an important element of retail districts and cities” (Florida, 2004; Hospers and Van Dalm, 2005; Jacobs, 1969). But they are not often taken seriously as workplaces in literature about work. About this matter of customers working in cafés, there is very little research, even though there is an increasing amount of the literature about the ‘mobile workers’. Mobile workers are people who are working at home (home based workers), but also working while they are in cars, planes, trains, hotels, or in cybercafés and so on. It means that people, working anywhere they can work by using technology to facilitate work. In today’s world, the most important facility is internet access, so a place where has an internet access is an excellent place to work for mobile workers.

Few studies have pointed out how the public and semi-public spaces stimulates social life. “In early days, the ‘wired’ nature of desktop computing limited the potential for Internet use to blend into urban public spaces. With few exclusions, such as libraries, Internet cafés, and community technology centers, Internet use was limited to the home and workplace. The relation between Internet use and home-centeredness engendered concern that new media use increased privatism” (Graham and Marvin, 2001). “In the last decade, the rapid development in the availability of wireless internet access in public

spaces has been seen” (Hampton and Gupta, 2008). Today, one of these public spaces is cafés. They have internet access, comfortable seating, employees serving and basic facilities. That is why and because of other lots of reasons cafés preferred as a workplace by people in these days. Moreover, Anjum, Paul, and Ashcroft (2005) enhanced this idea with “The idea that workers must work together in one place is now outmoded and many organizations promote mobility of their workforce to facilitate communication of knowledge” (Anjum, Paul and Ashcroft, 2005, p.74). “Much of the research literature addressing office environments has focused on either subjective assessments of physical components or attributes and how these affect employee satisfaction and performance” (Larsen, Adams, Deal, Kweon, & Tyler, 1998; Sundstrom, Town, Rice, Osborn, & Brill, 1994), “or they have involved pre-post occupancy evaluations of office renovations, or moves, adds and changes” (Oldham, 1988; Spreckelmeyer, 1993; Zalesny & Farace, 1987). However, there is very few study that mentions public spaces as a workplace. This study explores cafés as significant workplaces.

However, Jewson and Walters Kingdom, in their research, found “cafés are insignificant places as a workplace” (Felstead, A., Jewson, N., Walters, S., 2005a, 2005b). They indicated that in cafés “it may be difficult [for workers] to make expensive and long-term claims for space” (p. 151). On the other hand, “geographers in the UK have displayed that cafés are central to the lives of city residents” (Laurier, 2008; Laurier & Philo, 2006a). Cafés, in their view, are crucial places in the development of modernity and to commerce conducted in productive cities. Their approach emphasizes the value of understanding micro everyday performs of work in order to capture the flexibility and creativity. Also, the nuances of organizations’ continuous influence over subjectively

incorporated self-control strategies and tactics that come into play when people are working away from the formal workplace. Therefore, the mobile workers look for places they can work in and relax.

That is to say that, public spaces play a unique role in shaping and maintaining personal networks. “The ubiquitous availability of wireless Internet access will encourage greater participation in public spaces, lead to increased public interactions, and possibly diversify the composition of people’s social networks” (Hampton and Gupta, 2008, p. 836).

Hampton and Gupta (2008) indicated a term ‘true mobiles’ “who consider cafés, which have internet access, functioned as an environment for activities which are focused on the completion of ‘work’ (studying, paid work, etc.). True mobiles identified the cafés as a ‘space of productivity’ ” (Hampton and Gupta, 2008). According to their work, some true mobiles feel good to get out of the office environment and see cafés as places good for their productivity. Brill, Margulis, and Konar (1984) ranked factors, which impact on productivity according to their significance. The factors are sequenced based on the importance: furniture, noise, flexibility, comfort, communication, lighting, temperature and the air quality.

True mobiles are seeing cafés as a source of creativity and the environment of cafés is helping them to focus their work. The background noise, music or conversation of others help them to focus. Also, some of the true mobiles indicated that the café environment

provides an ‘escape’ from the feeling of obligation in their actual workplace. Moreover, true mobiles are seeing the sitting in a café is a temporary break. It is because some of them are home based workers but when they go to a café it is a matter of changing the dynamic.

2.4. Cafés as a Studying Place

Recently, students prefer studying in cafés rather than libraries. “Many academic libraries have left off being designed as a stereotypical and silent space” (Hunter and Cox, 2013). “Even though libraries are supporting multiple types of work and rich technology, it is apparent that many students prefer to study in informal learning spaces such as cafés rather than libraries” (Waxman, Clemons, Banning and McKelfresh, 2007). Therefore, besides mobile workers students are studying in cafés as well, because they want to study in informal and relaxed places. “Some young people would like to visit the library as they are visiting cafés where have relaxed ambiance where they can chat, study or have a rest” (Pomerantz & Marchionini, 2007).

However, Bickford and Wright (2007) argued that “less contact with faculty, more commuters and a secularized society have eroded social interactivity” (p. 44). In other words, collaborative study in informal learning spaces is becoming increasingly common. Lefever and Bashir’s (2011) findings at Bradford University support this with the idea of students feel more attached to specific informal learning spaces. In their view students see informal learning spaces as somewhere to study without being confined by regulations. Moreover, in their study, Beckers, van der Voordt and Dewulf (2016) said

that, “Modern ICT facilities support new ways of learning and give students the opportunity to study anytime, anyhow, and anywhere” (p. 3). In the same study, the researchers indicated that, “... class attendance with watching web lectures at home or anywhere else, such as on public transport, in cafes or outside in the park” (p. 4). This shows that students do not prefer to study just at campus or classrooms, instead they prefer public and semi-public places to study.

When students prefer to study in an informal spaces, physical spaces have a great importance on working or studying in cafés. Whilst the importance of students studying with each other collaboratively has been undervalued, the role that environmental factors play has not. For instance, the research by Chism (2007) has highlighted that the “sensory stimulation of informal spaces such as the decor, carpeting and lighting greatly influences students’ perceptions of where it is good to study” (p. 7). At the University of Sheffield, students found the “temperature being right, spaces not being too noisy and a good use of color schemes important features of lecture rooms” (Cox, 2011, p. 197). Also, Fister (2009) claimed that “good lighting, comfortable furniture, warm colors and access to food were the most important design features of workplace for students” (p. 11). According to Juhnevicā & Udre (2010), young people prefer comfortable workplaces and more freedom to move around and explore the space; they need a place to use their laptops and different zones to work. Many young people prefer to work in open space workplace together with others. Accordingly, physical environment has a great importance on students preferring a studying place.

Also there are extensive researches which indicate that the ambiance created in informal learning spaces is influenced by more than just the physical design. Waxman, Clemons, Banning and McKelfresh (2007) emphasized that the “opportunities to socialize and convenience greatly influenced which informal learning spaces students used” (p. 117). Also, Lefever and Bashir (2011) found that “being welcoming, comfortable, safe and friendly” (p. 5) were the most important factors in students’ choice of informal learning space at Bradford University. This furthers the point that the atmosphere created in informal learning spaces is influenced by many factors such as physical space, social space and ambiance.

The next chapter provides more explanation about physical space, social space and ambiance characteristics of cafés. The café environment and its influence on customers’ working or studying behaviors are explained in this chapter.

CHAPTER III

SPACE CHARACTERISTICS OF CAFÉS

3.1. Physical Space Characteristics

The physical space of cafés covers five basic categories which are, exterior, interior, layout, design, and decoration. All of them affect the customers feeling and behavior.

Exterior space includes the storefront, signboard, tents, entrances, windows, the general architectural style, color, and even availability of parking. Research on this topic is narrow but has displayed that people are greatly variable and subject to their own preferences. Interior space in a café are those such as flooring, lighting, displayed product, temperature, cleanliness, music, and smells. Each of these spaces has been presented to effect sales, perceived time spent in place and processing time. According to Anandasivam & Cheong (2008), “all senses can be involved such as music, nice but not annoying smell, good lightning, comfortable furniture, pictures on the walls and many other things can make users feel welcomed. A variety of different furniture, different zones and places to gather or be alone can provide different types of users with just what they need” (Anandasivam & Cheong, 2008, p. 46).

Layout and design cover textures, product settlement, and division of floor space.

“Point-of-purchase and decoration include product displays, shelving, posters, signage, and wall decorations. The relationship between variables such as placement, purpose, and prominence of these items with sales is complex” (Turley and Milliman 2000, p.

16). According to McCabe, (2003), “dark colors may subdue excitable behavior, bright color will stimulate” (McCabe, 2003, p. 46). In the past dark colors were preferred for workplaces but today bright and natural colors are selected in terms of human psychology. Also as Sufar, Talib & Hambali (2012) stated that “good lighting is needed for study, but intimate lighting may be excellent for reflective areas. Also, there is a great importance of sound level and noise in the workplace”. (p. 23) “Where noise levels exceed 85 decibels, workers were twice as likely to report negative effect, four times more likely to report nervous reactions and experienced more symptoms on a mental health checklists (e.g. anxiety, social dysfunction)” (Cooper, Boyko, and Codinhoto, 2008, p. 20). On the other hand, the presence of plants in the environment increases the comfort and feeling of well-being. “Unlike noise which is generally perceived to have a negative impact on wellbeing, views from workplace windows and the presence of windows and plants can have a positive impact” (Cooper, Boyko, and Codinhoto, 2008, p. 20). The issue of proper lighting is a very important and debatable component in a workplace. Because Knez and Enmarker (1998) said that, it affects males and females differently, males prefer more bluish lighting, and females prefer more reddish lighting. “However, there is no doubt that both genders prefer the warmest and the least cool lighting in terms of color temperature” (Knez and Enmarker, 1998). In this respect, warm artificial and natural lighting has a great influence on preferring a café as a workplace. The Commission for Architecture & the Built Environment and the British Council for Offices carried out a study revealed that adequate lighting and having proper daylight can increase productivity by between 20 per cent and 28 per cent.

Somerville and Collins (2008), recognized the significance of comfortable furniture and their ability to be reconfigured in a place. Also, Somerville and Collins (2008), found that students prefer to study in open and unconfined places. In addition, Anjum, Paul, and Ashcroft (2005) indicated that “Workplaces today and in the future need to offer the flexibility of both space and personnel, breaking away from hierarchical patterns of the past. They should be dynamic to allow interchange of ideas and maximum communication” (p. 74). Therefore, there is no doubt that the specialties of an environment are greatly important for workers to be successful and happy.

An environment is a highly influential factor for working effectively. As the research determines, “... moving to a better-quality physical environment improves one’s mental well-being. At the neighborhood level, living in poorer neighborhoods decreases mental wellbeing” (Cooper, Boyko, and Codinhoto, 2009, p. 9). According to Darly and Gilbert (1985), Holahan (1986), Russell and Ward (1982), Stokols and Altman (1987), human behavior is affected by the physical setting and interior environment in which occurs is especially a truism. That is why lots of people want to be and work in a better environment than their workplace or their home even their neighborhood. In addition, a study The American Society of Interior Designers (ASID, 1999) carried out to come up with the workplace design is one of the top three factors, which influence performance and job satisfaction.

In addition, there is a term ‘the virtual office’. Anjum, Paul, and Ashcroft (2005) mentioned ‘the virtual office’ as, “The idea of the ‘Virtual Office’ has emerged with the advent of cordless technology: mobile phones, laptop computers, pagers and electronic

notebooks have made it possible to work anywhere. Also referred to as the ‘Nomadic Office’ and while sedentary employees are restricted to a single static workplace, nomadic workers conduct their work in many different places such as cars, trains, hotel rooms, and airport lounges etc. using mobile technology” (p. 76). Today for mobile workers a place used as a workplace there is usually a need for technological devices, therefore, a café should contain some technological facilities as well. According to Anjum, Paul and Ashcroft (2005), a workplace should provide “a space to make a confidential telephone call in a public place; better seating to use a laptop; an extra space to lay down reference documents; improved lighting for reading and using computers; and improvements in furniture” (p. 78). Therefore, a café can provide all of these facilities to customers who use the place as a workplace.

3.2. Social Space Characteristics

Social space includes communication, privacy, the feeling of ownership, place attachment, the ability to territorialize, trust, respect, anonymity, productivity, opportunity to social interaction, and the opportunity to linger. Altman and Low (1992) defined place attachment as “the bonding of people to places” (p. 58). They explained that the bonds contain emotions and geographic setting which can vary in scales such as home, street, and community. First, people want to be with the attachment figure specifically when they are under stress. Second, people develop comfort and security from the attachment figure, and third, people protest when the attachment figure becomes or threatens to become inaccessible. Several studies have also shown that “the feeling of attachment is a result of both physical and social imperatives” (Waxman,

2006, p. 36; Burley, 2007, p. 23). Forms of physical stimuli, that influence consumer's feeling and behavior, include place detail, design elements, product characteristics and quality, healthy environment, and the like. A sparkling atmosphere and the feeling of a "home away from home" are also greatly related to the customers' emotional attachment. According to Appel-Meulenbroek, Groenen, and Janssen (2011), the basic principles of the social spaces of informal learning space are user requirements regarding privacy and concentration, also communication and interaction. "Privacy is essentially about control over the amount of social interaction" (Budie, 2016, p. 76). Concentration is a must for most of the workers and can be provided with less noise and more space. As Budie indicated (2016) that a worker's need is 'the need for concentration' instead of 'the need for a cell office' means that people can concentrate even they are not in a cell office. Also for Budie (2016), communication and collaboration are significantly important factors for workers use public spaces as a workplace. "Besides, mobile workers may have a higher need for communication" (Venezia & Allee, 2007, p.89). Appel-Meulenbroek, Groenen, and Janssen (2011) also mentioned that, individual control as a fundamental component of the social space. Individual control refers to 'the degree of autonomy in deciding what to do, where, and when'.

Sheltering and territoriality are other important reasons for using cafés as workplaces. Having personal space is a significantly key factor in students' preference of study locations. Bennett (2006) and Bodnar (2009) are amongst lots of researchers who claim that students appreciate furniture which can be reconfigured according to their needs.

Another research was conducted at universities such as at the University of Sheffield. In this research, Cox (2011) highlighted that students' feel restricted by the design of lecture theatres because they had difficulty spreading on a large area with their belongings. At Oregon State University the "convenience, comfort, spreading out and the availability of resources" (Vondracek, 2007, p. 287) are seen as the main reasons for using informal learning spaces rather than libraries. Also safety is an important factor for selecting a place as a workplace. "Feeling safe while sitting a café and when walking around the neighborhood also feeling socially connected with the community have a positive mental health" (Cooper, Boyko, and Codinhoto, 2009, p.12).

3.3. Ambiance Characteristics

"Ambiance is a roughly defined term which includes numerous factors, such as social and physical surroundings, sound, temperature, smell, the color of the environment, duration, distractions, food and beverage, temperature, and time of consumption" (Stroebele and De Castro 2004). Some research has actually suggested that "in certain situations, the ambiance of a location can be more important than the product" (Kotler, 1973, p. 52). The café owners, who have found their place in a community and support customers who visit cafés and purchase food, tea, or other beverages, with a variety of services such as coffee, also appreciate this concept. Accordingly, the history of the cafés as a third place is selling a specific ambiance. Kivela (1997) emphasized the importance of warm, cozy and attractive ambiance in influencing people to choose a café. The selection of the right café, that suits people's purpose, desire, and preferences,

will increase the planning of these people to revisit the café as a workplace or studying place.

“The gross, often vague, features or qualities of the environment that carry an emotional valence and can be highly effective in eliciting effect are termed preferenda” (Zajonc, 1980, p. 147). “In the field of environmental aesthetics, ambiance is the term used to describe the overall effect of such physical and social features of an environment, that is, of preferenda, on individual feelings (affect) and behavior, actions, or reactions” (Brawley, 1992, p. 256).

Mehrabian and Russel (1974) studied ambient (lighting, music) and social ones (number, friendliness of employees) on respondents’ pleasure and arousal, and willingness to buy. “Environmental psychologists propose that individuals react to their environment with two contrasting forms of behavior: approach and avoidance” (Mehrabian and Russel, 1974, p. 204), where the approach is a desire to stay, explore and affiliate, and avoidance is the opposite. Much of the research on store atmospherics has presumed a mediating effect of mood on consumers’ cognition and behavior. Obermiller and Bitner (1984) showed that respondents who viewed retail products in an emotionally pleasing environment evaluated products more positively than subjects who viewed the same products in an unpleasant environment (Obermiller and Bitner, 1984, p.48).

According to Sufar, Talib, and Hambali (2012), “physical environment includes sensory aspects and has the power to affect mood and emotion. Perception of the environment, in its most strict sense, refers to the process of becoming aware of a space by the acquisition of information through the sensations of sight, hearing, smell, touch, and taste. Cognition is the mental processing of this sensory information. This may involve the activities of thinking about, remembering, or evaluating the information. Spatial behavior refers to responses and reactions to the environmental information acquired through perception and cognition. The designer creates environmental stimuli to direct these psychological stages as well as the secondary processes of motivation, effect, and development. Environmental expectations, another determining element to be considered by the interior designer, are developed over time through experience and interaction with the environment” (Sufar, Talib, and Hambali, 2012, p. 10).

“Ambiant notifications are different as they are not supposed to attract the users’ attention directly. Visually, the detection of events is more efficient if these are located within the spotlight of attention” (Wiehr, Voit, Weber, Gehring, Witte, Kärcher, Henze, and Krüger, 2016, p. 19).

“Inability to control the ambient properties of the workplace to satisfy workers’ requirements is likely to result in some increased level of individual stress. Air quality and noise in the workplace are cited as the properties most likely to negatively impact workers’ wellbeing. Light and lighting in the workplace can positively or negatively impact workers’ mental wellbeing, depending on demographic characteristics, such as gender, and other office design issues (e.g. open-plan versus segmented office layout).

Finally, views from windows and the very presence of windows and plants in workplaces appear to positively impact workers' mental wellbeing. When plants and flowers were added to the work environment, subjects in the study, both men and women demonstrated more innovative thinking and created innovative solutions to office problems" (Ulich, 2003, p. 21). "Ambiant factors stimulate both learning and mental capital" (Cooper, Boyko and Codinhoto, 2008, p.25).

"Floor level is another ambiant property associated with dwelling type that impacts learning and mental capital. Like living in high-rise versus low-rise dwellings, living on higher floors is viewed as detrimental to one's mental wellbeing, affecting emotional illness and hostility. This is found mainly among individuals living with non-related people in one dwelling" (Mitchell, 1971, p. 89).

"Noise generally is viewed as a negative ambiant property in physical environments. Other ambiant properties of physical environments like dampness, mold, temperature, and pollution exert a negative impact on learning and mental capital. Two final ambiant properties that appear mostly to have a negative impact on learning and mental capital are crowding and density" (Cooper, Boyko, and Codinhoto, 2008, p. 10).

"The quality of the ambiant environment includes, for instance, acoustics, lighting and air quality which are significant mediating and moderating variables across the five Challenges, as well as temperature, color, ventilation, humidity, access to nature, having views of nature and natural sunlight and having plants in offices and homes" (Cooper, Boyko and Codinhoto, 2008, p. 10). "It means such as temperature, sounds, layout,

lighting, and colors can stimulate perceptual and emotional responses in consumers and affect their behavior” (Yildirim, Akalin-Baskaya, and Hidayetoglu, 2007, p. 34).

According to Bell (2008) cited that ambient influences include the non-visual sensory or atmospheric aspects of a service setting, including sounds, smells, and temperature.

“Because these atmospheric influences can arouse intense emotions and create mood, they strongly contribute to the total customer experience” (Carbone and Haeckel, 1994; Le Bel, 2005, p. 22).

“A lively atmosphere, a regular customer base, and the feeling of a ‘home away from home’ were also highly correlated with customers’ emotional attachment” (Stark, 2013, p. 28). An important factor affects the ambiance is the use of color in an environment.

“The use of color affects purchasing rates, consumer feeling, image, and retail sales” (Turley and Milliman, 2000, p. 195). Another important factor is music. As Turley and Milliman (2000) indicated that, type of music in a place have an impact on sales, traffic flow, and perception of the actual time spent in an environment. “Therefore, type of music and the volume level of music are effective on people’s preference of cafés as a workplace. Also, the design characteristics created an ambiance, of a café, were 53% linked with the level of emotional attachment of customers to the place” (Tumanan and Lansangan 2012, p. 35). This study shows that interior design elements and design style are very influential atmospheric factors on customers’ place attachment.

In this thesis, according to the literature review aspects, there will be analyzed space characteristics of cafés (Table 1).

Table 1: Summary of Space Characteristics.

Physical Space Characteristics	Lighting Furniture Layout Cleanliness Design Style View Color Menu
Social Space Characteristics	Privacy Level Noise Level Productivity Level Creativity Level Socialization Level Security Level Worker Behavior Other Customers
Ambiance Characteristics	Music Choice Amb. - Design Style Amb. – Color Amb. – Lighting Level Air Quality Amb. – View Amb. – Noise Level

The following chapter explains the problem statement and research questions. Also, there is the conceptual framework of the study, hypotheses, and stages of the study, instruments, participants and the setting.

CHAPTER IV

METHODOLOGY

4.1. Problem Statement

This study is done to understand what characteristics, physical space, social space, ambiance, attract people to work or study in café environment. And also, what are the characteristics of café are more preferred by its customers. In addition, the place rating level, satisfaction level, and recommendation level of café customers are studied in this study.

This study intends to fill the research gaps by investigating the impact of physical space, social space and ambiance of cafés on preferring as a workplace at these cafés. The specific objectives of this study are:

- Evaluating the effect of physical space characteristics of cafés on customers' preference of cafés as a workplace.
- Evaluating the effect of social space characteristics of cafés on customers' preference of cafés as a workplace.
- Evaluating the effect of ambiance characteristics of cafés on customers' preference of cafés as a workplace.
- Identifying the most important space characteristics that influence customers' preference.

- Evaluating the effect of café space characteristics on satisfaction level of customers who are working in those cafés.
- Evaluating the effect of café space characteristics on recommendation level of customers who are working in those cafés.

Evaluating the effect of café space characteristics on place rating level of customers who are working in those cafés.

4.1.1. Research Questions

In this study there are two main research questions:

- As a workplace, what characteristics does a café possess to attract its customers?
- As a workplace, what are the characteristics of cafés that are more preferred by its customers than the others?

4.1.2. Hypotheses

To achieve the objectives of the study, the following hypotheses are tested:

- H1: Physical space characteristics have a positive effect on preference of cafés as a workplace.
- H2: Social space characteristics have a positive effect on preference of cafés as a workplace.
- H3: Ambiance characteristics have a positive effect on preference of cafés as a workplace.

4.2. Method of the Study

4.2.1. Conceptual Framework of the Study

The research framework of this study takes a few steps toward a more complete picture of how the spaces of cafés influence on preferring as a workplace. The conceptual framework is shown in Figure 1. This study uses a questionnaire in order to measure the impact of these factors on preferring cafés as a workplace.

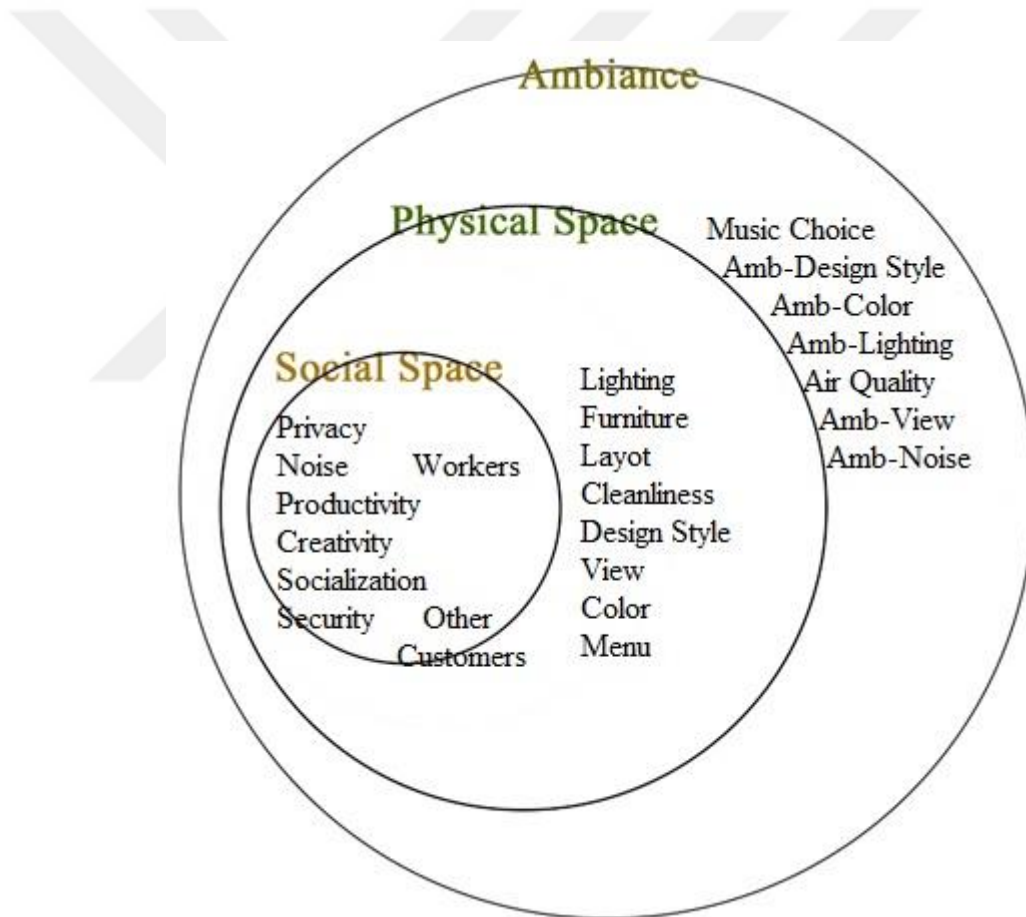


Figure 1. Conceptual framework of the study.

The conceptual framework is created by three space of the place according to the literature review. First one is social space in the core of framework and includes privacy, noise, productivity, creativity, socialization, security, workers and other customers as

characteristics. Secondly, there is physical space which includes lighting, furniture, layout, cleanliness, design style, color and menu as a space characteristics. Finally, there is ambiance which includes music choice, amb-design style, amb-color, amb-lighting, air quality, amb-view and amb-noise as ambiance characteristics.

The work flow is starting with the identifying the cafés used as a workplace or study place. After identifying process there will be studied determining the spaces influence cafés to be workplaces. At the end of this study, there will start the analysis process. The stages of the study is shown in Table 2. Consequently, as the main purpose of this study, there will be a discovery about what the influential spaces on preferring a café as a workplace are.

Table 2. Stages and instruments of the study.

Stages of the Study	Instruments
1. Identifying the cafés used as workplaces or study places.	Observation Sheet
2. Determining the spaces; Physical Space Social Space Ambiance	Questionnaire
3. Analysis of the influential spaces on preferring a café as a workplace	Statistical Analysis by SPSS

4.2.2. Instruments

There are two instruments used in this study to identify why people prefer that particular café to work or study in and which space is influential on this preference. These instruments are the observation sheet and the questionnaire. Observation is made to determine the activities that people are doing in these cafés as a work, their age group and how long they stay (see Appendix A). The questionnaire (see Appendix B) consists of five parts: demographic variables, physical space characteristics of the café, social space characteristics of the café, ambiance characteristics of the café and general opinions about the café. At the end of the study, for the statistical analysis, the SPSS was used. The chosen cafés were analyzed in terms of physical space, social space and ambiance of the interior environment.

4.2.3. Participants

The participants of this study was the customers of cafés. Intercepted convenience sampling method was used to randomly select participants filling out the questionnaire among the customers who are working or studying in cafés. While working on their work, customers at these cafés were asked whether or not they are interested in completing a questionnaire. Therefore, participation in this study was on voluntary basis. The field study was done on weekdays and weekends from 12 pm to 6 pm because people usually come to these cafés and do their work at these times.

4.2.4. Setting of the Study

A field study approach was used in this research work for several causes. Subjects of the study were spending a moderate to a long time while directly observing and experiencing the physical space, social space and ambiance of particular cafés in the real environment. Among cafés used as a workplace in Ankara, Çankaya (Figure 2) were used as a field. The cafés which are Sardunya Café, Café des Café, Sakal Café, Ardiç Café, Nedjima Café and Aylak Madam Café were selected to conduct the questionnaire. This study selects these café environments because there are lots of people are going there in order to study their lessons, do their business or read a book. Also, these cafés consider people working or studying there and have similar interior design style. These cafes are selected in this study because either these places are in the center of the city, or they are closer to the university bus stops.



Figure 2. Location of the Cafés

All these café environments have useful design elements with cozy ambiance. These cafés have a peaceful music, enough amount of plug sockets, Wi-Fi access, comfortable table set up and delicious menu serving also except Ardiç Café they all have a garden. Because of the location of these cafés are in the center of the city and provide a socialization people come here to do their own activities. The aim of these cafés is to provide to customers a comfortable and appealing table set up, warm lighting, calm music and peaceful ambiance. This study predicts that physical space, social space, and ambiance with these components, affect customers to prefer these cafés as a workplace.

Aylak Madam Café has homey atmosphere, comfortable and cozy ambiance. There is indoor sitting area and also the outdoor sitting area (Figure 3).



Figure 3: Aylak Madam Café (<http://aylakmadam.com/ankara.php>)

Nedjima Café has more dynamic interior design style, there is again an indoor and the outdoor sitting areas (Figure 4).



Figure 4: Nedjima Café (https://www.yelp.com.tr/biz_photos/nedjima-ankara-2?select=0YWYfKrSch9zVgTeXgaS4A)

Sakal Café has bohemian and cozy ambiance as well. It has the indoor and outdoor sitting areas (Figure 5).



Figure 5: Sakal Café (<http://www.360cities.net/image/sakal-cafe-bar-ankara-turkey>)

Ardıç Café has more like a library house design style and does not have an outdoor sitting area (Figure 6).



Figure 6: Ardıç Café (<http://kitikedi.com/ardic-kitabevi-ankara/>)

Café des Café has the relaxing and cozy interior design style. Also it has the indoor and outdoor sitting areas (Figure 7).



Figure 7: Café des Café (<https://www.biliste.com/ankarada-ders-calisilabilecek-sakin-mekan/>)

The results of the statistical analysis, the demographic characteristics, comparison of importance and suitability of café space characteristics, priority of spaces, relationship between café space characteristics and findings of the empirical study are presented in the next chapter.



CHAPTER V

RESULTS

5.1. Demographic Characteristics

The survey was conducted with 134 participants who were studying in café environments. Data are collected through a field study approach that involves observation and interviewing of subjects who spend several hours in a café environment. Participation was voluntary and no reward incentive was provided. Among the participants, 64.2% are women and 35.8% are men. Table 3 summarizes the demographic profile of the respondents.

Table 3. Demographic characteristics of the participants of the study

Characteristics	Category	Frequency	Percentage
Gender	Female	86	64.2
	Male	48	35.8
Age	Less than 20	26	19.4
	20-29	79	59.0
	30-39	25	18.7
	40 and more	3	3.0
Education level	Primary school	1	0.7
	High school	23	17.2
	University	82	61.2
	Graduate school	28	20.9
Marital status	Single	124	92.5
	Married	6	4.5
	Divorced	3	2.2
	Widowed	1	0.7

According to the study, the average age of the respondents is 23. The vast majority of the respondents (79 people, 59%) are in the 20-29 age range. Related to the education level of the participants, the highest percentage (82 people, 61.2%) is university students. According to the classification of marital status of the participants, the majority (124 people, 92.5%) are single.

Findings related to the visiting frequency of the café showed that the highest percentage group is (53 people, 39.6%) who visit the café 1-2 times in a week and followed by the group (46 people, 34.3%) who visit the café 1-2 times in a month (Figure 8).

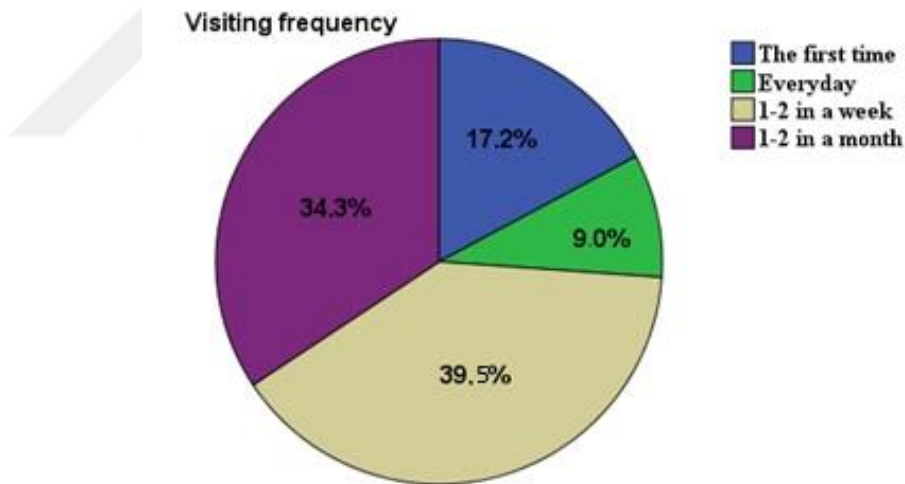


Figure 8. Visiting frequency of the participants

5.2. Comparison of Importance Given by the Customer and Suitability of Café Space

Customers rated the importance that give to each issue of the physical, social and ambient space characteristics. Later, customers also rated the suitability of each issue of the physical, social and ambient space characteristics of the café that they are frequently attending.

In this study, Table 4 presents descriptive statistics of physical space, social space and ambient characteristics related to the importance given by the customers and suitability of the café characteristics.

Table 4. Given Importance by Customers and Suitability of the Space Characteristics

Physical Space Characteristics	Importance				Suitability			
	M	SD	95% CI		M	SD	95% CI	
			LL	UL			LL	UL
Lighting	4.28	0.87	4.13	4.43	4.12	0.94	3.96	4.28
Furniture	4.28	0.86	4.13	4.42	4.01	0.88	3.86	4.17
Layout	4.03	1.05	3.85	4.21	3.86	0.93	3.70	4.02
Cleanliness	4.56	0.75	4.43	4.69	4.25	0.94	4.09	4.42
Design style	4.15	1.07	3.97	4.33	4.00	1.01	3.83	4.17
View	3.40	1.23	3.19	3.61	2.99	1.25	2.78	3.21
Color	4.19	0.91	4.03	4.34	3.96	0.96	3.80	4.13
Menu	4.10	1.12	3.91	4.30	3.90	1.02	3.72	4.07
Social Space Characteristics								
Privacy level	3.94	0.91	3.78	4.10	3.92	1.00	3.75	4.09
Noise level	4.41	0.77	4.28	4.55	3.92	1.11	3.73	4.12
Productivity level	4.35	0.76	4.22	4.48	4.24	0.87	4.09	4.39
Creativity level	4.31	0.77	4.18	4.44	4.26	0.81	4.12	4.40
Socialization level	3.86	1.13	3.67	4.06	3.91	1.12	3.72	4.10
Security level	4.41	0.75	4.28	4.54	4.29	0.71	4.17	4.42
Worker behavior	4.41	0.72	4.28	4.53	4.35	0.74	4.22	4.47
Other customers	3.91	1.11	3.72	4.10	3.79	1.10	3.60	3.98
Ambiance Characteristics								
Music choice	4.57	0.72	4.45	4.70	4.36	0.90	4.20	4.51
Design style	4.19	1.00	4.02	4.36	4.17	0.89	4.02	4.32
Color	4.05	1.07	3.87	4.24	4.10	0.94	3.94	4.26
Lighting	4.33	0.86	4.18	4.48	4.07	0.96	3.91	4.24
Air quality	4.41	0.75	4.28	4.54	4.09	0.93	3.93	4.25
View	3.43	1.22	3.22	3.64	3.16	1.26	2.94	3.37
Noise level	4.39	0.87	4.24	4.54	3.82	1.16	3.62	4.02

M= Mean; SD= Standard Deviation; CI= Confidence Interval; LL= Lower Limit; UL= Upper Limit

For each physical space characteristic, a paired sample t-test is conducted, in order to compare if there is a significant difference between importance given by the customer and suitability of the physical space characteristic (Appendix 1C). The mean of importance given to the furniture characteristic is 4.28 which is 0.26 higher than the suitability of furniture characteristic and this difference is statistically significant at the 0.01 level ($t=3.46$, $df=133$, $p<0.001$) as seen in Table 5. The mean of importance given to the cleanliness characteristic is 4.56 which is 0.31 higher than the suitability of cleanliness characteristic and this difference is statistically significant at 0.01 level ($t=3.85$, $df=133$, $p<0.001$) as seen in Table 5. The mean of importance given to the view characteristic is 3.40 which is 0.41 higher than the suitability of view characteristic and this difference is statistically significant at 0.01 level ($t=3.08$, $df=133$, $p<0.001$) as seen in Table 5. The mean of importance given to the physical color characteristic is 4.19 which is 0.22 higher than the suitability of physical color characteristic and this difference is statistically significant at 0.01 level ($t=3.45$, $df=133$, $p<0.001$) as seen in Table 5. The mean of importance given to the menu characteristic is 4.10 which is 0.21 higher than the suitability of menu characteristic and this difference is statistically significant at 0.01 level ($t=2.19$, $df=133$, $p<0.001$) as seen in Table 5. Therefore, there is a significant difference between importance and suitability of furniture, cleanliness, view, color and menu among physical space characteristics.

Table 5. Paired Samples t-Tests for Physical Space Characteristics

Paired Samples Test								
Importance vs Suitability of Physical Space Characteristics	Paired Differences							
				95% CI				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
Lighting Level	.157	.941	.081	-.004	.317	1.928	133	.056
Furniture	.261	.875	.076	.112	.411	3.455	133	.001
Layout	.172	1.052	.091	-.008	.351	1.890	133	.061
Cleanliness	.306	.920	.079	.149	.463	3.852	133	.0001
Design Style	.149	.889	.077	-.003	.301	1.944	133	.054
View	.410	1.542	.133	.147	.674	3.080	133	.003
Color of Area	.224	.752	.065	.095	.352	3.445	133	.001
Menu	.209	1.104	.095	.020	.398	2.191	133	.030

For physical space, there are three characteristics that did not differ significantly at $\alpha=0.05$ (Table 5). There is no difference in the mean of importance given by the customer and suitability of lighting level, layout and design style at the 0.05 level.

For each social space characteristic, a paired sample t-test is conducted, in order to compare if there is a significant difference between importance given by the customer and suitability of the social space characteristic (Appendix 2C). The mean of importance given to the noise level characteristic is 4.41 which is 0.49 higher than the suitability of noise level characteristic and this difference is statistically significant at the 0.01 level ($t=4.76$, $df=133$, $p<0.001$) as seen in Table 6. Therefore, there is a significant difference between importance and suitability of noise level social space characteristic (Table 6).

Table 6. Paired Samples t-Test for Social Space Characteristics

Importance vs Suitability of Social Space Characteristics	Paired Differences						Sig. (2- tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% CI		t		
				Lower	Upper			
Privacy Level	.023	.783	.068	-.112	.157	.332	132	.740
Noise Level	.485	1.181	.102	.283	.687	4.755	133	.0001
Productivity Level	.112	.732	.063	-.013	.237	1.770	133	.079
Creativity Level	.052	.686	.059	-.065	.169	.881	133	.380
Socialization Level	-.045	.925	.080	-.203	.113	-.561	133	.576
Security Level	.119	.705	.061	-.001	.240	1.961	133	.052
Worker Behavior	.060	.572	.049	-.038	.157	1.208	133	.229
Other Customers	.119	.950	.082	-.043	.282	1.455	133	.148

For social space characteristics, there are seven variables that did not differ significantly at $\alpha=0.05$ (Table 6). There is no difference in the mean importance given by the customer and suitability of privacy level, productivity level, creativity level, socialization level, security level, worker behavior, and other customers at the 0.05 level.

For each ambiance characteristic, a paired sample t-test is conducted, in order to compare if there is a significant difference between importance given by the customer and suitability of the ambiance characteristic (Appendix 3C). The mean of importance given to the music choice characteristic is 4.57 which is 0.22 higher than the suitability of music choice characteristic and this difference is statistically significant at the 0.05 level ($t=3.39$, $df=133$, $p<0.001$) as seen in Table 7. The mean of importance given to the ambiance lighting level characteristic is 4.33 which is 0.25 higher than the suitability of ambiance lighting level characteristic and this difference is statistically significant at the 0.05 level ($t=2.59$, $df=133$, $p<0.011$) as seen in Table 7. The mean of importance given to the air quality characteristic is 4.41 which is 0.32 higher than the suitability of air

quality characteristic and this difference is statistically significant at the 0.01 level ($t=4.44$, $df=133$, $p<0.001$) as seen in Table 7. The mean of importance given to the ambiance view characteristic is 3.43 which is 0.27 higher than the suitability of view characteristic and this difference is statistically significant at the 0.05 level ($t=2.24$, $df=133$, $p<0.027$) as seen Table 6. The mean of importance given to the ambiance noise level characteristic is 4.39 which is 0.57 higher than the suitability of ambiance noise level characteristic and this difference is statistically significant at the 0.01 level ($t=5.19$, $df=133$, $p<0.001$) as seen in Table 7. Therefore, there is a significant difference between importance and suitability of music choice, ambiance lighting level, air quality, view, and ambiance noise level social space characteristics (Table 7).

Table 7. Paired samples t-Test for Ambiance Characteristics

Importance vs Suitability of Ambiance Characteristics	Paired Differences						Sig. (2- tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% CI		t		df
				Lower	Upper			
Music Choice	.216	.739	.064	.090	.343	3.388	133	.001
Design Style	.022	.827	.071	-.119	.164	.313	133	.754
Color of Area	-.045	.812	.070	-.184	.094	-.638	133	.524
Ambiance Lighting Level	.254	1.135	.098	.060	.448	2.588	133	.011
Air Quality	.321	.837	.072	.178	.464	4.437	133	.0001
View	.269	1.388	.120	.031	.506	2.240	133	.027
Ambiance Noise Level	.567	1.265	.109	.351	.783	5.189	133	.0001

For ambiance characteristics, there are two variables that did not differ significantly at $\alpha=0.05$ (Table 7). There is no difference in the mean of importance given by the customer and suitability of design style and color of area at the 0.05 level.

5.3. Priority of Spaces

As seen in Table 8, most participants rate ambiance (47.0%) as the most important characteristics for them in a café environment. Then, it is followed by the physical space (35.1%) and finally there is social space (17.9%).

Table 8. Importance level of physical space, social space and ambiance

	Frequency	Percentage
Importance of Physical Space	47	35.1
Importance of Social Space	24	17.9
Importance of Ambiance	63	47.0

5.4. Place Rating Level, Satisfaction Level and Recommendation Level of Customers on Cafes

Findings related to the place rating level demonstrate that, most participants of Café des Café (85%) rated the café environment as very good as a studying place. Then it is followed by Sardunya Café, Aylak Madam Café and Ardiç Café with 80% place rating level of participants. Sakal Café follows them by 68% place rating level. The least place rating level of participants are in Nedjima Café (41.7%) as seen in Figure 9 (Appendix 1D).

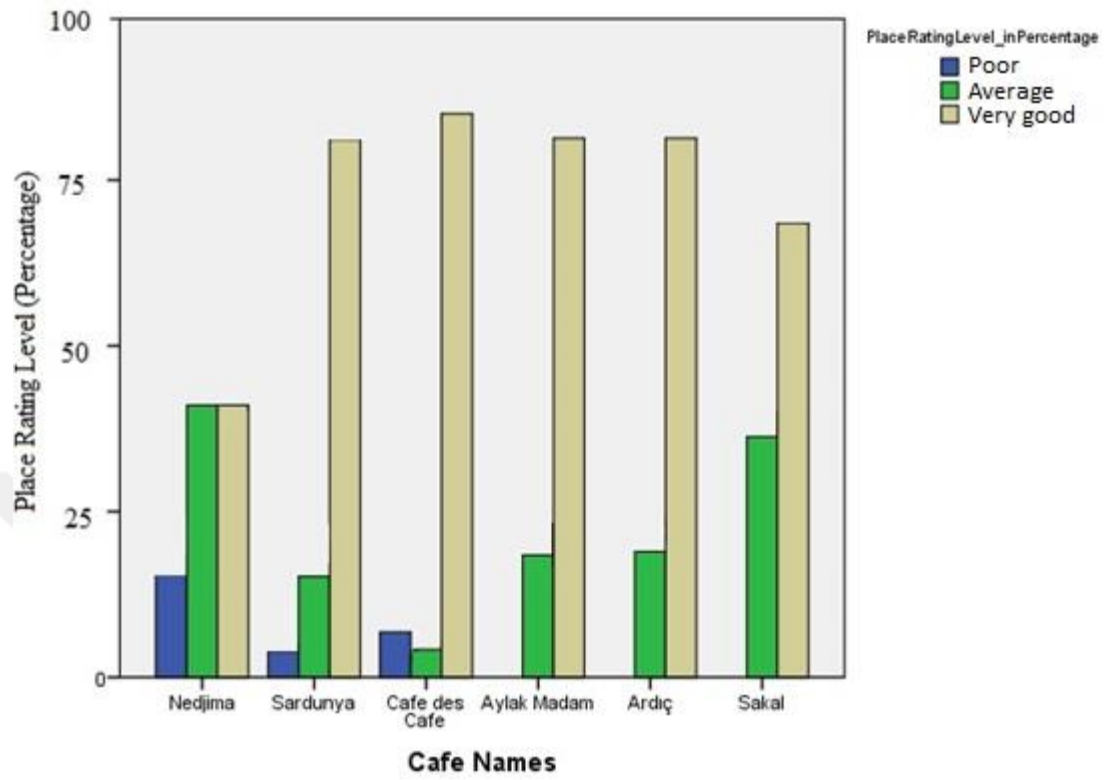


Figure 9. Place rating level in particular cafés

Findings related to the satisfaction level demonstrate that, all the participants of the Café des Café (100%) are satisfied in studying in that café. Then it is followed by Sakal Café (88%) as the second in rank that the satisfaction level of the participants. Aylak Madam Café and Ardiç Café are ranked as the third with 85% satisfaction level of the participants. Sardunya Café follows them by 80% satisfaction level. The least satisfaction level of participants are in Nedjima Café (45.8%) as seen in Figure 10 (Appendix 2D).

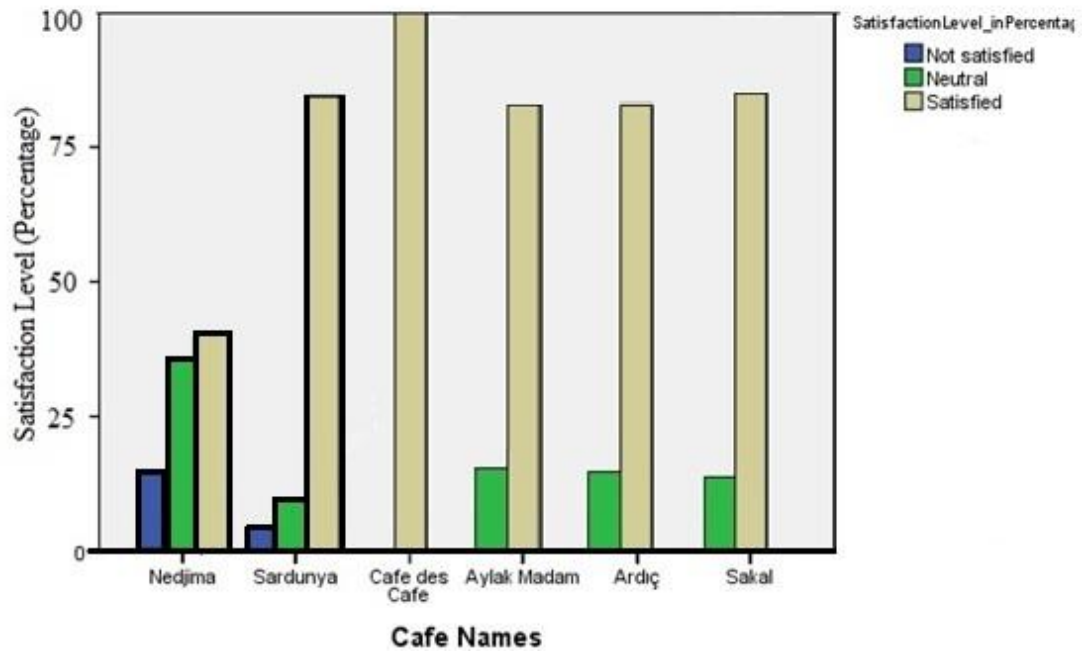


Figure 10. Satisfaction level in particular cafés

Findings related to the recommendation level demonstrate that, most participants of the Café des Café (90%) are absolute about recommendation of studying in that café. Then it is followed by Aylak Madam Café and Ardiç Café with 85% recommendation level of the participants. Sardunya Café follows them by 72% and Sakal Café with 64% recommendation level. The least recommendation level of participants are in Nedjima Café (16.7%) as seen in Figure 11 (Appendix 3D).

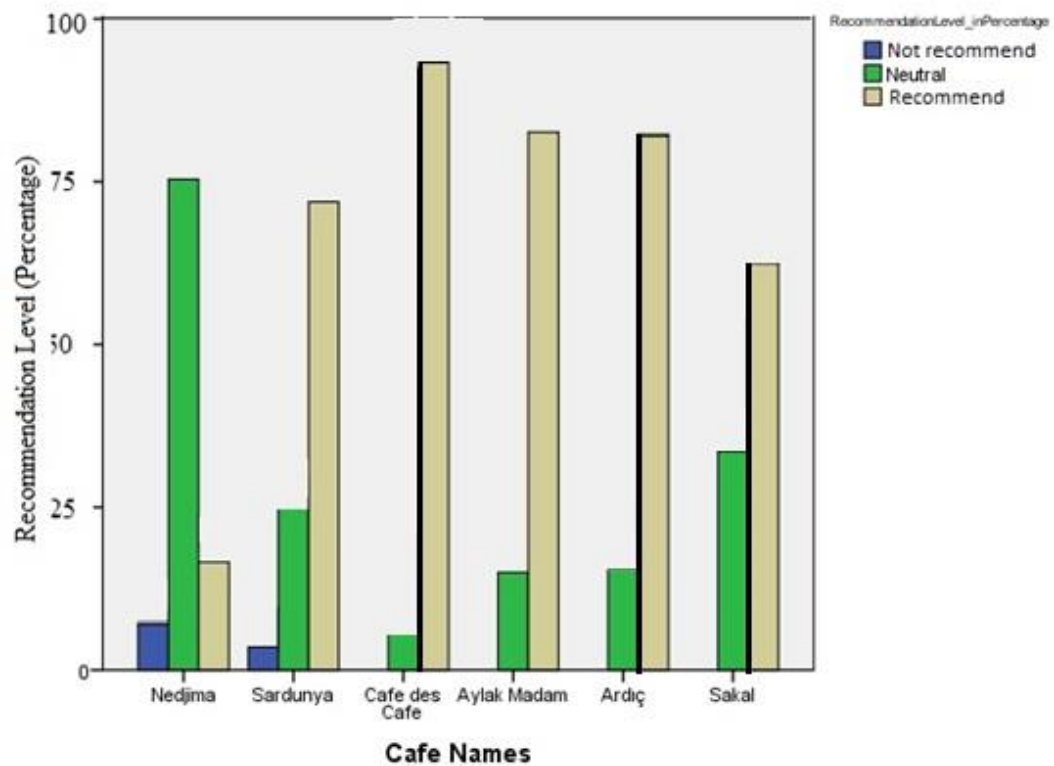


Figure 11. Recommendation Level in particular cafés

5.5. Association of Physical, Social Space and Ambience Characteristics with Customer's Ratings

This study demonstrates that physical space, social space and ambience are all influential on customers' preference in studying in a café environment. The preferred cafés provide opportunities to them as their second home or second workplace.

5.5.1. Between Café Characteristics and Place Rating Level

The Chi-Square test is done to see if there is a significant association between physical space, social space and ambience characteristics and place rating of customers.

According to the findings as seen in Table 9, lighting, layout, cleanliness, view, color, design style, and menu are important physical space characteristics that are associated with place rating level of café customers. Also, the customers associated with a privacy level, noise level, productivity level, socialization level and security level characteristics of social space with place rating level of cafés. Music choice, color, lighting level, air quality, ambience view and noise level are also the key characteristics of ambience that is associated with the place rating level of cafés (Appendix E).

Table 9. Chi-square test for independence – Place Rating Level versus Space

Characteristics

		Place Rating Level		
		χ^2	df	p
Physical Space Characteristics	Lighting Level	8.58	1	0.006
	Layout	4.42	1	0.041
	Cleanliness	15.15	1	0.0001
	View	11.22	1	0.001
	Color	11.08	1	0.002
	Design Style	7.96	1	0.007
	Menu	5.61	1	0.024
Social Space Characteristics	Privacy Level	4.64	1	0.045
	Noise Level	7.09	1	0.013
	Productivity Level	16.68	1	0.0001
	Socialization Level	11.52	1	0.001
	Security Level	12.93	1	0.001
Ambiance Characteristics	Music Choice	4.94	1	0.036
	Amb - Color	5.69	1	0.032
	Amb – Lighting Level	13.10	1	0.001
	Air Quality	8.91	1	0.005
	Amb - View	10.02	1	0.002
	Amb – Noise Level	7.96	1	0.007

5.5.2. Between Café Characteristics and Satisfaction Level

The Chi-Square test is done to see if there is a significant association between physical space, social space and ambiance characteristics and satisfaction level of customers.

According to the findings as seen in Table 10, lighting level, furniture, layout, cleanliness, design style, view and color are important physical space characteristics that are associated with satisfaction level of café customers. Also, the customers associated with a privacy level, noise level, productivity level, socialization level and security level

characteristics of social space with satisfaction level of café customers. Music choice, ambiance color, ambiance lighting level, air quality, ambiance view and ambiance noise level are also the key characteristics of ambiance that is associated with the satisfaction level of café customers (Appendix E).

Table 10: Chi-Square test for independence-Satisfaction Level versus Space Characteristics

		Satisfaction Level		
		χ^2	df	p
Physical Space Characteristics	Lighting Level	8.48	1	0.008
	Furniture	5.99	1	0.029
	Layout	6.61	1	0.019
	Cleanliness	10.87	1	0.002
	Design Style	5.89	1	0.022
	View	9.61	1	0.002
	Color	8.06	1	0.008
Social Space Characteristics	Privacy Level	3.78	1	0.072
	Noise Level	7.87	1	0.010
	Productivity Level	7.27	1	0.016
	Socialization Level	7.22	1	0.009
	Security Level	5.47	1	0.026
Ambiance Characteristics	Music Coice	10.37	1	0.003
	Amb - Color	9.58	1	0.004
	Amb – Lighting Level	7.27	1	0.016
	Air Quality	9.47	1	0.004
	Amb - View	5.71	1	0.018
	Amb – Noise Level	8.64	1	0.009

5.5.3. Between Café Characteristics and Recommendation Level

The Chi-Square test is done to see if there is a significant association between physical space, social space and ambiance characteristics and recommendation level of customers. According to the findings as seen in Table 11, lighting level, furniture, layout, cleanliness, design style, view and color are important physical space characteristics that are associated with recommendation level of café customers. Also, the customers associated with a privacy level, noise level, productivity level, socialization level, security level and other customers characteristics of social space with recommendation level of café customers. Music choice, ambiance color, ambiance lighting level, air quality, ambiance view and ambiance noise level are also the key characteristics of ambiance that is associated with the recommendation level of café customers (Appendix E).

Table 11: Chi-Square test for independence – Recommendation Level versus Space Characteristics

		Recommendation Level		
		χ^2	df	p
Physical Space Characteristics	Lighting Level	17.04	1	0.0001
	Furniture	5.54	1	0.023
	Layout	13.34	1	0.001
	Cleanliness	25.96	1	0.0001
	Design Style	6.45	1	0.016
	View	9.08	1	0.003
	Color	6.90	1	0.012
Social Space Characteristics	Privacy Level	12.56	1	0.072
	Noise Level	24.59	1	0.0001
	Productivity Level	21.91	1	0.0001
	Socialization Level	24.76	1	0.0001
	Security Level	28.46	1	0.0001
	Other Customers	8.72	1	0.005
Ambiance Characteristics	Music Coice	21.91	1	0.0001
	Amb_Color	4.73	1	0.041
	Amb – Lighting Level	21.91	1	0.0001
	Air Quality	16.30	1	0.0001
	Amb - View	8.24	1	0.005
	Amb – Noise Level	26.59	1	0.0001

5.6. The Relationship between Physical, Social Space and Ambience Characteristics with Customer's Ratings

The Regression test is conducted to see if there is a relationship between physical space, social space, ambience and place rating level of café customers.

5.6.1. Between the Physical Space, Social Space and Ambience Characteristics and Place Rating Level

A stepwise regression test is used to estimate how the customers rate the café if it had certain space characteristics. The independent variables are all the physical, social and ambience characteristics of the café and the dependent variable is the place rating level of café customers (Table 9). There is seen two models and first one includes productivity level, second one includes productivity level and physical view (Appendix 1F). Model 1 means that place rating level of customers depends on the unstandardized coefficients constant B value plus productivity level B value. Model 2 means that place rating level of customers depends on the unstandardized coefficients constant B value plus productivity level B value plus physical space view B value (Table 11).

Model 1: Place Rating Level = 1.441 + 0.386 (Productivity Level)

Model 2: Place Rating Level = 1.268 + 0.321 (Productivity Level) + 0.187 (Physical View)

Table 12: Multiple regression of independent variables against place rating level

	<u>B</u>	<u>Beta</u>	<u>t-Ratio</u>	<u>Sig.</u>
Constant				
Lighting Level		0.053	0.559	0.577
Layout		-0.027	-0.294	0.769
Cleanliness		0.136	1.285	0.201
View	0.187	0.204	2.440	0.016
Color		0.121	1.331	0.185
Design Style		0.091	1.019	0.310
Menu		0.077	0.895	0.372
Privacy Level		-0.047	-0.486	0.628
Noise Level		-0.147	-1.053	0.294
Productivity Level	0.321	0.293	3.512	0.001
Socialization Level		0.117	1.247	0.215
Security Level		0.087	0.807	0.421
Music Choice		-0.060	-0.603	-0.053
Amb - Color		0.034	0.373	0.709
Amb – Lighting Level		0.133	1.365	0.175
Air Quality		0.44	0.445	0.657
Amb - View		0.006	0.042	0.967
Amb – Noise Level		0.030	0.299	0.765

Coefficient of Multiple Determination is $R^2 = 0.118$ for model 1 and $R^2 = 0.150$ for model 2.

$F(1,132) = 18.771$ and $p < 0.0001$ (Model1)

$F(2,131) = 8.851$ and $p < 0.001$ (Model 2)

There is a very strong evidence of a relationship between productivity level and place rating level.

5.6.2. Between the Physical Space, Social Space and Ambiance Characteristics and Satisfaction Level

On the other hand, all the independent characteristics (seen in Table 9) are conducted into the regression test either. In the results, there is seen two possible models; first one includes cleanliness, second one includes cleanliness and physical view (Appendix 2F). Model 1 means that satisfaction level of customers depends on the unstandardized coefficients constant B value plus cleanliness level B value. Model 2 means that satisfaction level of customers depends on the unstandardized coefficients constant B value plus cleanliness level B value plus physical space view B value (Table 12).

Model 1: Satisfaction Level = $1.827 + 0.293$ (Cleanliness)

Model 2: Satisfaction Level = $1.730 + 0.223$ (Cleanliness) + 0.155 (Physical View)

Table 13: Multiple regression of independent variables against satisfaction level

	<u>B</u>	<u>Beta</u>	<u>t-Ratio</u>	<u>Sig.</u>
Constant				
Lighting Level		0.097	0.950	0.344
Furniture		0.094	1.042	0.299
Layout		0.035	0.338	0.736
Cleanliness	0.223	0.216	2.451	0.016
Design Style		0.081	0.884	0.378
View	0.155	0.190	2.151	0.033
Color		0.128	1.419	0.158
Privacy Level		0.026	0.276	0.783
Noise Level		0.101	1.025	0.307
Productivity Level		0.069	0.643	0.521
Socialization Level		0.102	1.097	0.274
Security Level		-0.082	-0.622	0.535
Music Coice		0.144	1.459	0.147
Amb – Lighting Level		0.058	0.511	0.610
Air Quality		0.113	1.066	0.288
Amb - View		-0.063	-0.466	0.642
Amb – Noise Level		0.112	1.087	0.279

Coefficient of Multiple Determination is $R^2 = 0.074$ for model 1 and $R^2 = 0.099$ for model 2.

$F(1,132) = 11.649$ and $p < 0.0001$ (Model 1)

$F(2,131) = 4.849$ and $p < 0.001$ (Model 2)

There is a very strong evidence of a relationship between cleanliness and satisfaction level.

5.6.3. Between the Physical Space, Social Space and Ambiance Characteristics and Recommendation Level

When the independent variables are all the physical, social and ambiance characteristics of the café and the dependent variable is the recommendation level of café customers (Table 10), there is seen three models and first one includes security level, second one includes security level and socialization level, and third one includes security level, socialization level and ambiance noise level (Appendix 3F).). Model 1 means that recommendation level of customers depends on the unstandardized coefficients constant B value plus security level B value. Model 2 means that recommendation level of customers depends on the unstandardized coefficients constant B value plus security level B value plus socialization level B value. Model 3 means that recommendation level of customers depends on the unstandardized coefficients constant B value plus security level B value plus socialization level B value plus ambiance noise level B value (Table 13).

Model 1: Recommendation Level = $0.857 + 0.564 (\text{Security Level})$

Model 2: Recommendation Level = $0.713 + 0.403 (\text{Security Level}) + 0.257$
(Socialization Level)

Model 3: Recommendation Level = $0.557 + 0.303 (\text{Security Level}) + 0.198$
(Socialization Level) + $0.217 (\text{Ambiance Noise Level})$



Table 14: Multiple regression of independent variables against recommendation level

	<u>B</u>	<u>Beta</u>	<u>t-Ratio</u>	<u>Sig.</u>
Constant				
Lighting Level		0.065	0.699	0.486
Furniture		-0.031	-0.374	0.709
Layout		0.048	0.541	0.589
Cleanliness		0.118	0.962	0.338
Design Style		-0.014	-0.172	0.863
View		0.064	0.799	0.426
Color		-0.009	-0.106	0.915
Privacy Level		-0.011	-0.123	0.902
Noise Level		0.062	0.472	0.637
Productivity Level		0.059	0.565	0.573
Socialization Level	0.198	0.207	2.294	0.023
Security Level	0.303	0.248	2.641	0.009
Other Customers		0.001	0.010	0.992
Music Coice		0.064	0.629	0.531
Amb_Color		-0.031	-0.376	0.707
Amb – Lighting Level		0.102	1.028	0.306
Air Quality		-0.023	-0.221	0.826
Amb - View		0.044	0.545	0.587
Amb – Noise Level	0.217	0.195	2.031	0.044

Coefficient of Multiple Determination is $R^2 = 0.206$ for model 1, $R^2 = 0.256$ for model 2 and $R^2 = 0.273$.

$F(1,132) = 25.103$ and $p < 0.0001$ (Model 1)

$F(2,131) = 15.799$ and $p < 0.001$ (Model 2)

$F(3, 130) = 11.686$ and $p < 0.001$ (Model 3)

There is a very strong evidence of a relationship between security level and recommendation level.

The next chapter explains the discussion and conclusion parts. Discussion part includes the similarity and differences of Starbucks and this study. Conclusion part includes limitations of the study and the future research areas.

CHAPTER VI

DISCUSSION AND CONCLUSION

6.1. Discussion

The objective of this study was to understand the effect of physical space, social space and ambiance characteristics on the preference of customers about café environment as a workplace. The aim of this study was also to discover the most important, space characteristic on the preference of customers. The findings revealed that physical space, social space, and ambiance characteristics have a significant influence on the selection a café as a workplace or studying place.

There are some studies that explore the physical and social space of Starbucks. In Lin's study, the research question asks that "What characteristics does Starbucks possess to attract its consumers?" (p. 121) and at the end of the study "the mean responses of a wide ($M = 3.63$, $SD = 1.02$) and clean space ($M = 4.19$, $SD = .75$), high coffee quality ($M = 3.96$, $SD = .85$), good service ($M = 4.06$, $SD = .84$), a pleasing decoration and design ($M = 4.06$, $SD = .78$), enjoyable music ($M = 3.77$, $SD = .86$), cozy surroundings ($M = 3.85$, $SD = .87$), comfortable seating ($M = 3.64$, $SD = .95$), and a prestigious reputation ($M = 4.26$, $SD = .83$) comprise the attraction for Starbucks consumers" (Lin, 2012, p. 122) in which respondents rated their level of agreement on a 5-point scale from strongly disagree to strongly agree. In Lin's (2012) study, "among these nine items, comfortable seating is the most important variable in predicting customer satisfaction, while wide space is the second most important predictor variable. There is statistical significance in items 'wide space' and 'comfortable seating', and there is a moderate but

statistically significant correlation between the third space and lifestyles” (Lin, 2012, p. 124).

In this study, as seen in Table 3, the mean responses of importance of cleanliness ($M = 4.56$, $SD = 0.75$) is the greatest value of physical space characteristics. It is followed by importance of lighting ($M = 4.28$, $SD = 0.87$) and importance of furniture ($M = 4.28$, $SD = 0.86$). Also, among social space characteristics, importance of noise level ($M = 4.41$, $SD = 0.77$), importance of security level ($M = 4.41$, $SD = 0.75$) and importance of worker behavior ($M = 4.41$, $SD = 0.72$) are the greatest value (Table 3). These characteristics are followed by importance of productivity level ($M = 4.35$, $SD = 0.76$) and importance of creativity level ($M = 4.31$, $SD = 0.77$). Finally in ambiance characteristics, the greatest mean value is importance of music choice ($M = 4.57$, $SD = 0.72$) and it is followed by importance of air quality ($M = 4.41$, $SD = 0.75$).

Also, in this study according to the results (Table 4), there is no difference in the mean of importance given by the customer and suitability of physical lighting level, layout and physical design style at the 0.05 level. In addition, again according to the results of this study (Table 5), there is no difference in the mean of importance given by the customer and suitability of privacy level, productivity level, creativity level, socialization level, security level, worker behavior and other customers at the 0.05 level. Finally, the results of this study show that (Table 6) there is no difference in the mean of importance given by the customer and suitability of ambiance design style and ambiance color of space at the 0.05 level.

6.1.1. Similarity and Differences of Starbucks and This Study

As it is said in the literature review (Bernson, 2011), cafés have a homey, artistic and intellectual style of design which is imitated home appearance like a living room.

Moreover, as it is said in Oldenburg's research (1999), semi-public spaces help create a sense of place, community, and social ties. Therefore, cafés encourage sociability instead of isolation. In this study, it is also seen that the selected café environments have a homey and intellectual style of design. Also, all of them are preferred by its customers as a workplace because of it is look like a living room without an isolation sense.

Also, as Sayers (2009) mentioned that people prefer to work or study in café environment because they can access informality, innovation, transaction, and socialization. All these components are found in this study as well. In other words, people prefer to work or study in these café environments because it provides to them informality and socialization without typical office regulations. Also, these cafés provide to its customer's innovative services and a good transaction.

According to some researchers (Graham and Marvin, 2001; Anjum, Paul, and Ashcroft, 2005; Hampton and Gupta, 2008) internet access, comfortable seating, employees serving and basic facilities are the most important components for customers who are working or studying in a café environment. Also, as Brill, Margulis, and Konar (1984) indicates that furniture, noise, flexibility, comfort, communication, lighting, temperature and the air quality are the important factors to people to prefer cafés as a workplace. Brill, Margulis and Konar (1984) also says that creativity and productivity level of people are increasing in café environments.

In Lin's (2012) study, the most of the respondents think Starbucks has a wide space and comfortable seating. That is why they identify Starbucks as the "third place." Therefore, from the consumer culture viewpoint, the consumption field is actually part of the commodity, and it is also closely related to consumers' lifestyles. In a word, the Starbucks space was created as a context for consumption". However, in this study, there have been found that people prefer the particular cafés as the "third place" because those cafés have nice music choice, clean environment, and nice workers in it (Table 3). "Starbucks does not only sell coffee and other hot and cold drinks but also snacks, coffee accessories, and gift items. By creating a 'memorable Starbucks experience', the company aims to create loyal customers. Starbucks wants customers to look at their stores as a so-called 'third place' to spend time, besides home and work. Different store design elements support creating a memorable Starbucks experience". In this terms, the cafés studied in this study differ from those studies about Starbucks.

The Starbucks Company imposed a non-smoking policy for almost all of its stores worldwide, in order to prevent the coffee aroma from being adulterated. For similar reasons, Starbucks asks its employees not to wear strong perfumes (Starbucks Corporation, 2008). However, in this study, the selected cafés do not impose these policies because the customers want to be free to do what they want to do. All the selected cafés have indoor and outdoor seating areas. There is no non-smoking policy in these selected cafés. Also, most of the employees wear freely in those cafés. All these elements support by appealing to customer's senses. Customers feel informality and relax in these café environments.

Several Starbucks stores also provide free electricity and wireless Internet access for their customers. These actions are additional efforts from Starbucks to create a ‘cocoon of coziness’ and keep the customer longer in the store. By offering free electricity and Internet access, Starbucks hopes that customers no longer have reason to go home. Next to the ‘traditional’ coffee, other hot drinks and accessories, Starbucks also recently created a ‘Starbucks Entertainment’ division and the ‘Starbucks Hear Music’ brand. By enlarging their traditional offer with these products, the company also tries to market books, music, and film in order to add more value for its customers and make the customers able to take the Starbucks’ experience home (Starbucks Coffee Company, 2008)” (Petermans & Van Cleempoel, 2009). Also, in this study, all the selected cafés have the internet access. However, there is no market in these cafés like Starbucks because there is not a desire to make this, but there is good atmosphere, social and physical space characteristics.

In addition, “coffee shop” is a term that describes procurement of products first, and individualized social relationships second such as Starbucks (Grafe, 2007). The function is the most important factor in coffee shop design. The self-service is the main reason of the formality and informality at the same time in the space. Because of the rigidity of the customers’ behavior when giving an order is more formal. For example, the relationship between customer and worker becomes more formal because there is a separation wall between them when ordering instead of face to face interaction when it is table service. However, after taking the coffee customers can do anything that they want in the shop. For instance, they can listen to music from their laptops without headphones or they can

go after finish their coffee without leaving a tip. However, in this study, there has been selected cafés that have face to face interaction. It helps customers to be socialized and have more informal communication with people while they are working or studying.

This study prefers to explore ‘café’ as a studying or working place instead of ‘café shop’ such as Starbucks because of cafés originality with physical space, social space, and ambiance. Eventually, Starbucks is a coffee shop chain in all over the world and all Starbucks’ have the same interior set design. Therefore, continental and specific cafés were chosen in this study.

6.2. Conclusion

This study intended to evaluate the effect of physical space, social space and ambiance characteristics on customers' preference on third place at regular café environments.

Findings related to the study indicated that all characteristics, which are physical space, social space and ambiance, have an influence on people to prefer these cafés as a workplace or studying place. Also, the aim of this study was to explore the significant physical, social and ambiance space characteristics. According to the results, cleanliness, lighting, and furniture are the important physical space characteristics for customers. Noise level, security level, and worker behavior are important social space characteristics for people as well. Also, among ambiance characteristics, music choice, air quality, and ambiance noise level are important ambiance characteristics for the customers who prefer the selected cafés as a workplace.

The findings on place rating level of customers confirmed that the social space characteristic, productivity level and the physical space characteristic, physical view are important to space characteristics for their preference of cafés as a workplace. That is to say, the café social environment should provide a productive feeling. Also, the physical view should be attractive for customers.

It was also found that cleanliness and physical view have a positive impact on the customers' preference of workplace on satisfaction level. In a word, the physical environment of the café should be clean enough and provide a good view to the customers feel satisfied.

In addition, it was also found that security level and socialization level from social space and ambiance noise level from ambiance are important characteristics for customers' recommendation level. In other words, the customers desire to be secure and also socialized. Plus, ambiance noise level is a key factor for the customers on the preference of cafés as a workplace and recommend these places.

This study has some limitations. The data was collected from only six cafés that have the similar interior design style located in Ankara, Turkey. Thus, we may not be able to generalize the results. Nevertheless, this study uniquely contributes to the literature.

There are some suggestions for future research. More research is needed to examine the preference of café customers on selecting as a workplace. Future researchers could use proposed framework of this study to across a variety of different interior design settings in a regular café environment.

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APPENDICIES

Appendix A

Table 1A. Observation sheet

Café name	Activity	Time	Average people	Age
Sakal	Business	1-2 hours	Young adult	20-29
	Study		Old adult	30-39
	Read a book			
Café des Cafe	Read a book	1 hour	Old adult	30-39
Sardunya	Read a book	2 hours	Old adult	30-39
Nedjima	Study	2-3 hours	Young adult	20-29
			Teenager	Less than 20
Ardıç	Study	2-3 hours	Young adult	20-29
	Read a book		Teenager	Less than 20
Aylak Madam	Business	2 hours	Young adult	20-29
	Study		Teenager	Less than 20
	Read a book			

Appendix B
Questionnaire
English



THE INFLUENCE OF SPACE CHARACTERISTICS ON THE PREFERENCE OF CAFES AS WORKPLACES

Aim of this study is to explore the influence of physical space, social space and ambiance characteristics on cafe customers who prefer to study in cafe environment. All information you provide will be kept confidential. The data will be used for master thesis of Interior Architecture and Environmental Design.

I. Demographic Information

1. Age:	Less than 20	☐	20-29	☐	30-39	☐	40 or above	☐		
2. Sex:	Female	☐	Male	☐						
3. Education Level:	Primary	☐	High	☐	University	☐	Graduate	☐	Other	☐
4. Occupation:										
5. Marital Status:	Single	☐	Married	☐	Divoced	☐	Widow	☐		
6. Your frequency of coming here?										
The first time	☐	Everyday	☐	1-2 times in a week	☐	1-2 times in a month	☐			

II. Physical Space

7. Please indicate that the importance level of physical space features below.

	Strongly unimportant		Neutral		Strongly important
	-2	-1	0	1	2
Lighting	●	●	●	●	●
Furniture	●	●	●	●	●
Layout	●	●	●	●	●
Cleanliness	●	●	●	●	●
Design Style	●	●	●	●	●
View	●	●	●	●	●
Color	●	●	●	●	●
Menu	●	●	●	●	●

8. Please indicate that the physical space features below according to your productivity level.

	Strongly disagree		Neutral		Strongly agree
	-2	-1	0	1	2
Lighting	●	●	●	●	●
Furniture	●	●	●	●	●
Layout	●	●	●	●	●
Cleanliness	●	●	●	●	●
Design Style	●	●	●	●	●
View	●	●	●	●	●
Color	●	●	●	●	●
Menu	●	●	●	●	●

III. Social Space

9. Please indicate that the importance level of social space features below.

	Strongly unimportant	-2	-1	0	Neutral	1	2	Strongly important
Privacy level	—	•	—	•	—	•	—	•
Noise level	—	•	—	•	—	•	—	•
Productivity level	—	•	—	•	—	•	—	•
Creativity level	—	•	—	•	—	•	—	•
Socialization level	—	•	—	•	—	•	—	•
Security level	—	•	—	•	—	•	—	•
Worker behavior	—	•	—	•	—	•	—	•
Other customers	—	•	—	•	—	•	—	•

10. Please indicate that the social space features below according to your productivity level.

	Strongly disagree	—	•	—	•	Neutral	—	•	—	•	Strongly agree
Privacy level	—	•	—	•	—	•	—	•	—	•	
Noise level	—	•	—	•	—	•	—	•	—	•	
Productivity level	—	•	—	•	—	•	—	•	—	•	
Creativity level	—	•	—	•	—	•	—	•	—	•	
Socialization level	—	•	—	•	—	•	—	•	—	•	
Security level	—	•	—	•	—	•	—	•	—	•	
Worker behavior	—	•	—	•	—	•	—	•	—	•	
Other customers	—	•	—	•	—	•	—	•	—	•	

IV. Ambiance

11. Please indicate that the importance level of ambiance features below.

	Strongly unimportant	-2	-1	0	Neutral	1	2	Strongly important
Music Choice	—	•	—	•	—	•	—	•
Amb-Design Style	—	•	—	•	—	•	—	•
Amb-Color	—	•	—	•	—	•	—	•
Amb-Lighting level	—	•	—	•	—	•	—	•
Air Quality	—	•	—	•	—	•	—	•
Amb-View	—	•	—	•	—	•	—	•
Amb-Noise level	—	•	—	•	—	•	—	•

12. Please indicate that the ambiance features below according to your productivity level.

	Strongly disagree	-1	0	1	Strongly agree
Music Choice	☐	☐	☐	☐	☐
Amb-Design Style	☐	☐	☐	☐	☐
Amb-Color	☐	☐	☐	☐	☐
Amb-Lighting level	☐	☐	☐	☐	☐
Air Quality	☐	☐	☐	☐	☐
Amb-View	☐	☐	☐	☐	☐
Amb-Noise level	☐	☐	☐	☐	☐

13. Please make an order among the importance level of features below.

Physical Space ☐

Social Space ☐

Ambiance ☐

Other ☐

14. Are you satisfied about studying in this place?

Strongly dissatisfied	-1	0	1	Strongly satisfied
☐	☐	☐	☐	☐

15. Do you recommend to study in this place to your friends?

Strongly not recommend	-1	0	1	Strongly recommend
☐	☐	☐	☐	☐

16. How do you describe this place to your friends?

Good lighting ☐	Good privacy ☐	Good music choice ☐
Secure ☐	Good noise level ☐	Comfortable furniture ☐
Creative ☐	Good view ☐	Good air quality ☐
Clean ☐	Productive ☐	Good workers ☐
Good design ☐	Good menu ☐	Good layout ☐
Good other customers ☐	Social ☐	Good color ☐
		Other.

17. How do you rate this place as a workplace?

Too bad ☐ Bad ☐ Neutral ☐ Good ☐ Very good ☐

18. Please indicate that if you have any suggestion about this place.

Questionnaire

Türkçe



THE INFLUENCE OF SPACE CHARACTERISTICS ON THE PREFERENCE OF CAFES AS WORKPLACES

Aim of this study is to explore the influence of physical space, social space and ambiance characteristics on cafe customers who prefer to study in cafe environment. All information you provide will be kept confidential. The data will be used for master thesis of Interior Architecture and Environmental Design.

I. Demographic Information

1. Age:	Less than 20 ☐	20-29 ☐	30-39 ☐	40 or above ☐	
2. Sex:	Female ☐	Male ☐			
3. Education Level:	Primary ☐	High ☐	University ☐	Graduate ☐	Diğer ☐
4. Meslek:					
5. Medeni Durumu:	Bekar ☐	Evli ☐	Boşanmış/Ayrı ☐	Dul ☐	
6. Ne sıklıkta buraya çalışmak için geliyorsunuz?					
	İlk defa ☐	Her gün ☐	Haftada 1-2 defa ☐	Ayda 1-2 defa ☐	

II. Fiziksel Özellikler

7. Mekanın aşağıdaki fiziksel özelliklerinin, burada çalışmayı seçmenizdeki önemini belirtiniz.

	Hiç önemi yok -2	-1	0	1	Çok önemli 2
Aydınlatması	●	●	●	●	●
Mobilyaları	●	●	●	●	●
Yerleşim planı	●	●	●	●	●
Temiz oluşu	●	●	●	●	●
Tasarım stili	●	●	●	●	●
Manzarası	●	●	●	●	●
Mekanın renkleri	●	●	●	●	●
Servis edilen ürünler	●	●	●	●	●

8. Mekanın aşağıdaki fiziksel özellikleri, bu mekanda çalışmanızın verimliliği açısından uygundur.

	Hiç katılmıyorum -2	-1	Nötrüm 0	1	Kesinlikle katılıyorum 2
Aydınlatması	●	●	●	●	●
Mobilyaları	●	●	●	●	●
Yerleşim planı	●	●	●	●	●
Temiz oluşu	●	●	●	●	●
Tasarım stili	●	●	●	●	●
Manzarası	●	●	●	●	●
Mekanın renkleri	●	●	●	●	●
Servis edilen ürünler	●	●	●	●	●

III. Sosyal Özellikler

9. Mekanın aşağıdaki sosyal özelliklerinin, burada çalışmayı seçmenizdeki önemini belirtiniz.

	Hiç önemi yok		Ne önemi var, ne yok		Çok önemli
	-2	-1	0	1	2
Kişisel gizlilik imkanı	●	●	●	●	●
Gürültü seviyesi	●	●	●	●	●
Üretkenlik hissi	●	●	●	●	●
Yaratıcılık hissi	●	●	●	●	●
Sosyalleşme imkanı	●	●	●	●	●
Güvenli oluşu	●	●	●	●	●
Çalışanların davranışı	●	●	●	●	●
Diğer kullanıcılar	●	●	●	●	●

10. Mekanın aşağıdaki sosyal özellikleri, bu mekanda çalışmanızın verimliliği açısından uygundur.

	Hiç katılmıyorum		Nötrüm		Kesinlikle katılıyorum
Kişisel gizlilik imkanı	●	●	●	●	●
Gürültü seviyesi	●	●	●	●	●
Üretkenlik hissi	●	●	●	●	●
Yaratıcılık hissi	●	●	●	●	●
Sosyalleşme imkanı	●	●	●	●	●
Güvenli oluşu	●	●	●	●	●
Çalışanların davranışı	●	●	●	●	●
Diğer kullanıcılar	●	●	●	●	●

IV. Ambiyans Özellikleri

11. Mekanın aşağıdaki atmosfer (ambiyans) özelliklerinin, burada çalışmayı seçmenizdeki önemini belirtiniz.

	Hiç önemi yok		Ne önemi var, ne yok		Çok önemli
	-2	-1	0	1	2
Müzik seçimleri	●	●	●	●	●
Tasarım stili	●	●	●	●	●
Mekanın renkleri	●	●	●	●	●
Aydınlatması	●	●	●	●	●
Hava kalitesi	●	●	●	●	●
Manzarası	●	●	●	●	●
Gürültü seviyesi	●	●	●	●	●

12. Mekanın aşağıdaki ambiyans özellikleri, bu mekanda çalışmanızın verimliliği açısından uygundur.

	Hiç katılmıyorum		Nötrüm	Kesinlikle katılıyorum	
Müzik seçimleri	-2	-1	0	1	2
Tasarım stili	•	•	•	•	•
Mekanın renkleri	•	•	•	•	•
Aydınlatması	•	•	•	•	•
Hava kalitesi	•	•	•	•	•
Manzarası	•	•	•	•	•
Gürültü seviyesi	•	•	•	•	•

13. Sizin burada çalışmanızı sağlayan aşağıdaki özellikleri önem sırasına göre "1" en önemli, "3" en önemlisi temsil edecek şekilde sıralayınız.

Mekanın fiziksel özellikleri ☐

Mekanın sosyal özellikleri ☐

Mekanın ambiyans özellikleri ☐

Diğer ☐

14. Bu mekanda çalışmaktan memnun musunuz?

Hiç memnun değilim	-2	-1	0	1	2	Çok memnunuz
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15. Bu mekanda çalışmayı arkadaşlarınıza tavsiye eder misiniz?

Hiç tavsiye etmem	-2	-1	0	1	2	Kesinlikle tavsiye ederim
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16. Bu mekanı çalışma alanı olarak nasıl tanımlarsınız? Uygun olan özellikleri işaretleyiniz.

İyi aydınlatılmış ☐	Kişisel gizlilik imkanı var ☐	Müzik seçimleri iyi ☐
Güvenli ☐	Gürültü seviyesi iyi ☐	Mobilyaları rahat ☐
Yaratıcılık hissi veriyor ☐	Manzarası güzel ☐	Hava kalitesi iyi ☐
Mekan temiz ☐	Üretkenlik hissi veriyor ☐	Çalışanları iyi ☐
Tasarım stili güzel ☐	Servis edilen ürünler iyi ☐	İyi yerleşim planlı ☐
Diğer kullanıcılar iyi ☐	Sosyalleşme imkanı var ☐	Mekanın renkleri güzel ☐
		Diğer ☐

17. Bu mekanı çalışma alanı olarak nasıl derecelendirirsiniz?

Çok iyi ☐ İyi ☐ Ne iyi, ne kötü ☐ Kötü ☐ Çok kötü ☐

18. Bu mekanla ilgili öneriniz varsa belirtiniz.

Appendix C

Table 1C: Paired Samples t-Test for Physical Space Characteristics

T-Test

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Importance of lighting	4,28	134	,879	,076
	Suitability of lighting	4,12	134	,942	,081
Pair 2	Importance of furniture	4,28	134	,862	,074
	Suitability of furniture	4,01	134	,884	,076
Pair 3	Importance of layout	4,03	134	1,054	,091
	Suitability of layout	3,86	134	,935	,081
Pair 4	Importance of cleanliness	4,56	134	,751	,065
	Suitability of cleanliness	4,25	134	,947	,082
Pair 5	Importance of design style	4,15	134	1,073	,093
	Suitability of design style	4,00	134	1,011	,087
Pair 6	Importance of view	3,40	134	1,233	,107
	Suitability of view	2,99	134	1,254	,108
Pair 7	Importance of color of area	4,19	134	,919	,079
	Suitability of color of area	3,96	134	,969	,084
Pair 8	Importance of menu	4,10	134	1,126	,097
	Suitability of menu	3,90	134	1,021	,088

		Paired Samples Correlations		
		N	Correlation	Sig.
Pair 1	Importance of lighting & Suitability of lighting	134	,468	,000
Pair 2	Importance of furniture & Suitability of furniture	134	,498	,000
Pair 3	Importance of layout & Suitability of layout	134	,447	,000
Pair 4	Importance of cleanliness & Suitability of cleanliness	134	,433	,000
Pair 5	Importance of design style & Suitability of design style	134	,638	,000
Pair 6	Importance of view & Suitability of view	134	,231	,007
Pair 7	Importance of color of area & Suitability of color of area	134	,683	,000
Pair 8	Importance of menu & Suitability of menu	134	,474	,000

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Importance of lighting - Suitability of lighting	,157	,941	,081	-,004	,317	1,928	133	,056
Pair 2	Importance of furniture - Suitability of furniture	,261	,875	,076	-,112	,411	3,455	133	,001
Pair 3	Importance of layout - Suitability of layout	,172	1,052	,091	-,008	,351	1,890	133	,061
Pair 4	Importance of cleanliness - Suitability of cleanliness	,306	,920	,079	-,149	,463	3,852	133	,000
Pair 5	Importance of design style - Suitability of design style	,149	,889	,077	-,003	,301	1,944	133	,054
Pair 6	Importance of view - Suitability of view	,410	1,542	,133	-,147	,674	3,080	133	,003
Pair 7	Importance of color of area - Suitability of color of area	,224	,752	,065	,095	,352	3,445	133	,001
Pair 8	Importance of menu - Suitability of menu	,209	1,104	,095	,020	,398	2,191	133	,030

Table 2C: Paired Samples t-Test for Social Space Characteristics

T-Test

		Paired Samples Statistics			
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Importance of privacy level	3,94	133	,919	,080
	Suitability of privacy level	3,92	133	1,000	,087
Pair 2	Importance of noise level	4,40	134	,777	,067
	Suitability of noise level	3,92	134	1,118	,097
Pair 3	Importance of productivity level	4,34	134	,767	,068
	Suitability of productivity level	4,23	134	,875	,076
Pair 4	Importance of creativity level	4,30	134	,776	,067
	Suitability of creativity level	4,25	134	,817	,071
Pair 5	Importance of socialising level	3,86	134	1,132	,098
	Suitability of socialising level	3,90	134	1,123	,097
Pair 6	Importance of security level	4,40	134	,757	,065
	Suitability of security level	4,28	134	,721	,062
Pair 7	Importance of behaviour of workers	4,40	134	,736	,064
	Suitability of behaviour of workers	4,34	134	,755	,065
Pair 8	Importance of other customers	3,90	134	1,116	,098
	Suitability of other customers	3,78	134	1,106	,098

		Paired Samples Correlations		
		N	Correlation	
Pair 1	Importance of privacy level & Suitability of privacy level	133	,670	,000
Pair 2	Importance of noise level & Suitability of noise level	134	,264	,002
Pair 3	Importance of productivity level & Suitability of productivity level	134	,609	,000
Pair 4	Importance of creativity level & Suitability of creativity level	134	,630	,000
Pair 5	Importance of socialising level & Suitability of socialising level	134	,664	,000
Pair 6	Importance of security level & Suitability of security level	134	,546	,000
Pair 7	Importance of behaviour of workers & Suitability of behaviour of workers	134	,706	,000
Pair 8	Importance of other customers & Suitability of other customers	134	,634	,000

Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Importance of privacy level - Suitability of privacy level	,023	,783	,068	-,112	,157	,332	132	,740
Pair 2	Importance of noise level - Suitability of noise level	,485	1,181	,102	,283	,687	4,755	133	,000
Pair 3	Importance of productivity level - Suitability of productivity level	,112	,732	,063	-,013	,237	1,770	133	,079
Pair 4	Importance of creativity level - Suitability of creativity level	,052	,686	,059	-,065	,169	,881	133	,380
Pair 5	Importance of <u>socialising</u> level - Suitability of <u>socialising</u> level	-,045	,925	,080	-,203	,113	-,561	133	,576
Pair 6	Importance of security level - Suitability of security level	,119	,705	,061	-,001	,240	1,961	133	,052
Pair 7	Importance of <u>behaviour</u> of workers - Suitability of <u>behaviour</u> of workers	,060	,572	,049	-,038	,157	1,208	133	,229
Pair 8	Importance of other customers - Suitability of other customers	,119	,950	,082	-,043	,282	1,455	133	,148

Table 3C: Paired Samples t-Test for Ambiance Characteristics

T-Test

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Amb Importance of music	4,57	134	,729	,063
	Amb Suitability of music	4,36	134	,904	,078
Pair 2	Amb Importance of design style	4,19	134	1,000	,086
	Amb Suitability of design style	4,17	134	,867	,078
Pair 3	Amb Importance of color of area	4,05	134	1,078	,093
	Amb Suitability of color of area	4,10	134	,941	,081
Pair 4	Amb Importance of lighting	4,33	134	,865	,075
	Amb Suitability of lighting	4,07	134	,963	,083
Pair 5	Amb Importance of air quality	4,41	134	,758	,065
	Amb Suitability of air quality	4,09	134	,930	,080
Pair 6	Amb Importance of view	3,43	134	1,229	,106
	Amb Suitability of view	3,16	134	1,262	,109
Pair 7	Amb Importance of noise level	4,39	134	,875	,076
	Amb Suitability of noise level	3,82	134	1,169	,101

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Amb Importance of music & Amb Suitability of music	134	,609	,000
Pair 2	Amb Importance of design style & Amb Suitability of design style	134	,625	,000
Pair 3	Amb Importance of color of area & Amb Suitability of color of area	134	,684	,000
Pair 4	Amb Importance of lighting & Amb Suitability of lighting	134	,232	,007
Pair 5	Amb Importance of air quality & Amb Suitability of air quality	134	,524	,000
Pair 6	Amb Importance of view & Amb Suitability of view	134	,379	,000
Pair 7	Amb Importance of noise level & Amb Suitability of noise level	134	,260	,002

Paired Samples Test

		Paired Differences						Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
					Lower	Upper		
Pair 1	Amb. Importance of music - Amb. Suitability of music	,216	,739	,064	,090	,343	3,388	,001
Pair 2	Amb. Importance of design style - Amb. Suitability of design style	,022	,827	,071	-,119	,164	,313	,754
Pair 3	Amb. Importance of color of area - Amb. Suitability of color of area	-,045	,812	,070	-,184	,094	-,638	,524
Pair 4	Amb. Importance of lighting - Amb. Suitability of lighting	,254	1,135	,098	,060	,448	2,588	,011
Pair 5	Amb. Importance of air quality - Amb. Suitability of air quality	,321	,837	,072	,178	,464	4,437	,000
Pair 6	Amb. Importance of view - Amb. Suitability of view	,269	1,388	,120	,031	,506	2,240	,027
Pair 7	Amb. Importance of noise level - Amb. Suitability of noise level	,567	1,265	,109	,351	,783	5,189	,000

Appendix D

Table 1D: Place Rating Level x Café Customers

Cafe Names * PlaceRatingLevel



Crosstab

		PlaceRatingLevel			Total
		Bad	Neutral	Good	
Cafe Names	Nedjima	4 16.7%	10 41.7%	10 41.7%	24 100.0%
	Sardunya	1 4.0%	4 16.0%	20 80.0%	25 100.0%
	Cafe des Cafe	2 10.0%	1 5.0%	17 85.0%	20 100.0%
	Aylak Madam	0 0.0%	4 20.0%	16 80.0%	20 100.0%
	Ardıç	0 0.0%	4 20.0%	16 80.0%	20 100.0%
	Sakal	0 0.0%	8 32.0%	17 68.0%	25 100.0%
Total		7 5.2%	31 23.1%	96 71.6%	134 100.0%

Symmetric Measures

	Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Interval by Interval Pearson's R	.198	.083	2.323	.022 ^c
Ordinal by Ordinal Spearman Correlation	.169	.093	1.971	.051 ^c
N of Valid Cases		134		

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Table 2D: Satisfaction Level x Café Customers

Cafe Names * SatisfactionLevel

Crosstab

		<u>SatisfactionLevel</u>			Total
		Not satisfied	Neutral	Satisfied	
Cafe Names	<u>Nedjima</u>	4 16.7%	9 37.5%	11 45.8%	24 100.0%
	<u>Sardunva</u>	2 8.0%	3 12.0%	20 80.0%	25 100.0%
	Cafe des Cafe	0 0.0%	0 0.0%	20 100.0%	20 100.0%
	<u>Aylak Madam</u>	0 0.0%	3 15.0%	17 85.0%	20 100.0%
	<u>Ardic</u>	0 0.0%	3 15.0%	17 85.0%	20 100.0%
	<u>Sakal</u>	0 0.0%	3 12.0%	22 88.0%	25 100.0%
Total		6 4.5%	21 15.7%	107 79.9%	134 100.0%

Symmetric Measures

		Value	<u>Asymp. Std. Error^a</u>	Approx. T ^b	Approx. Sig.
Interval by Interval	Pearson's R	.309	.075	3.726	.000 ^c
Ordinal by Ordinal	Spearman Correlation	.293	.089	3.521	.001 ^c
N of Valid Cases		134			
a. Not assuming the null hypothesis.					
b. Using the asymptotic standard error assuming the null hypothesis.					
c. Based on normal approximation.					

Table 3D: Recommendation Level x Café Customers

☒

Cafe Names * RecommendationLevel

Crosstab

		RecommendationLevel			Total
		Not recommend	Neutral	Recommend	
Cafe Names	Nedjima	2 8.3%	18 75.0%	4 16.7%	24 100.0%
	Sardunya	1 4.0%	6 24.0%	18 72.0%	25 100.0%
	Cafe des Cafe	0 0.0%	2 10.0%	18 90.0%	20 100.0%
	Aylak Madam	0 0.0%	3 15.0%	17 85.0%	20 100.0%
	Ardıç	0 0.0%	3 15.0%	17 85.0%	20 100.0%
	Sakal	0 0.0%	9 36.0%	16 64.0%	25 100.0%
	Total	3 2.2%	41 30.6%	90 67.2%	134 1000%

☐

Symmetric Measures

		Value	Asymp. Std. Error ^a	Approx. T ^b	Approx. Sig.
Interval by Interval	Pearson's R	.306	.084	3.690	.000 ^c
Ordinal by Ordinal	Spearman Correlation	.306	.093	3.690	.000 ^c
N of Valid Cases		134			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Appendix E

Table 1E: Chi-Square Test of Space Characteristics – Independent Ones

place2 * light2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,575 ^a	1	,003		
Continuity Correction ^b	7,384	1	,007		
Likelihood Ratio	8,191	1	,004		
Fisher's Exact Test				,006	,004
Linear-by-Linear Association	8,511	1	,004		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 11,06.

b. Computed only for a 2x2 table

place2 * layout2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,422 ^a	1	,035		
Continuity Correction ^b	3,596	1	,058		
Likelihood Ratio	4,280	1	,039		
Fisher's Exact Test				,041	,030
Linear-by-Linear Association	4,389	1	,036		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 11,91.

b. Computed only for a 2x2 table

place2 * cleanliness2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	15,146 ^a	1	,000		
Continuity Correction ^b	13,292	1	,000		
Likelihood Ratio	13,826	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	15,033	1	,000		
N of Valid Cases	134				

place2 * phy_designstyle2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,963 ^a	1	,005	,007	,006
Continuity Correction ^b	6,732	1	,009		
Likelihood Ratio	7,470	1	,006		
Fisher's Exact Test					
Linear-by-Linear Association	7,904	1	,005		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,79.

b. Computed only for a 2x2 table

place2 * view2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11,219 ^a	1	,001	,001	,001
Continuity Correction ^b	9,952	1	,002		
Likelihood Ratio	12,051	1	,001		
Fisher's Exact Test					
Linear-by-Linear Association	11,136	1	,001		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 15,60.

b. Computed only for a 2x2 table

place2 * phy_color2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11,076 ^a	1	,001	,002	,001
Continuity Correction ^b	9,562	1	,002		
Likelihood Ratio	10,248	1	,001		
Fisher's Exact Test					
Linear-by-Linear Association	10,993	1	,001		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 7,94.

b. Computed only for a 2x2 table

place2 * menu2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,605 ^a	1	,018	,024	,018
Continuity Correction ^b	4,580	1	,032		
Likelihood Ratio	5,290	1	,021		
Fisher's Exact Test					
Linear-by-Linear Association	5,563	1	,018		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,79.

b. Computed only for a 2x2 table

place2 * privacy2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,639 ^a	1	,031	,045	,026
Continuity Correction ^b	3,818	1	,051		
Likelihood Ratio	4,536	1	,033		
Fisher's Exact Test					
Linear-by-Linear Association	4,604	1	,032		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 13,61.

b. Computed only for a 2x2 table

place2 * noiselevel2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,095 ^a	1	,008	,013	,009
Continuity Correction ^b	5,948	1	,015		
Likelihood Ratio	6,684	1	,010		
Fisher's Exact Test					
Linear-by-Linear Association	7,042	1	,008		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,07.

b. Computed only for a 2x2 table

place2 * productivity2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	16,683 ^a	1	,000	,000	,000
Continuity Correction ^b	14,836	1	,000		
Likelihood Ratio	15,389	1	,000		
Fisher's Exact Test					
Linear-by-Linear Association	16,559	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,22.

b. Computed only for a 2x2 table

place2 * socialization2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11,521 ^a	1	,001	,001	,001
Continuity Correction ^b	10,232	1	,001		
Likelihood Ratio	11,422	1	,001		
Fisher's Exact Test					
Linear-by-Linear Association	11,435	1	,001		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 15,31.

b. Computed only for a 2x2 table

place2 * security2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	12,930 ^a	1	,000	,001	,001
Continuity Correction ^b	11,195	1	,001		
Likelihood Ratio	11,797	1	,001		
Fisher's Exact Test					
Linear-by-Linear Association	12,834	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,81.

b. Computed only for a 2x2 table

place2 * amb_color2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,689 ^a	1	,017		
Continuity Correction ^b	4,620	1	,032		
Likelihood Ratio	5,332	1	,021		
Fisher's Exact Test				,032	,018
Linear-by-Linear Association	5,647	1	,017		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 7,94.

b. Computed only for a 2x2 table

place2 * amb_light2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13,098 ^a	1	,000		
Continuity Correction ^b	11,468	1	,001		
Likelihood Ratio	12,120	1	,000		
Fisher's Exact Test				,001	,001
Linear-by-Linear Association	13,000	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,22.

b. Computed only for a 2x2 table

place2 * air_quality2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,911 ^a	1	,003		
Continuity Correction ^b	7,591	1	,006		
Likelihood Ratio	8,321	1	,004		
Fisher's Exact Test				,005	,004
Linear-by-Linear Association	8,845	1	,003		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,51.

b. Computed only for a 2x2 table

place2 * amb_view2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10,017 ^a	1	,002	,002	,001
Continuity Correction ^b	8,827	1	,003		
Likelihood Ratio	10,611	1	,001		
Fisher's Exact Test					
Linear-by-Linear Association	9,942	1	,002		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 16,16.

b. Computed only for a 2x2 table

place2 * amb_noiselevel2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,963 ^a	1	,005	,007	,006
Continuity Correction ^b	6,732	1	,009		
Likelihood Ratio	7,470	1	,006		
Fisher's Exact Test					
Linear-by-Linear Association	7,904	1	,005		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,79.

b. Computed only for a 2x2 table

Table 2E: Chi-Square Test of Space Characteristics – Not Independent Ones

place2 * furniture2
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,307 ^a	1	,038	,055	,036
Continuity Correction ^b	3,372	1	,066		
Likelihood Ratio	4,050	1	,044		
Fisher's Exact Test					
Linear-by-Linear Association	4,275	1	,039		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 7,66.

b. Computed only for a 2x2 table

place2 * amb_designstyle2
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,114 ^a	1	,078	,114	,064
Continuity Correction ^b	2,371	1	,124		
Likelihood Ratio	2,975	1	,085		
Fisher's Exact Test					
Linear-by-Linear Association	3,090	1	,079		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,07.

b. Computed only for a 2x2 table

place2 * creativity2
Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,549 ^a	1	,110	,135	,091
Continuity Correction ^b	1,813	1	,178		
Likelihood Ratio	2,408	1	,121		
Fisher's Exact Test					
Linear-by-Linear Association	2,530	1	,112		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,81.

place2 * workerbehavior2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,203 ^a	1	,273		
Continuity Correction ^b	,717	1	,397		
Likelihood Ratio	1,153	1	,283		
Fisher's Exact Test				,319	,197
Linear-by-Linear Association	1,194	1	,275		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,81.

b. Computed only for a 2x2 table

place2 * other_customers2

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,975 ^a	1	,324		
Continuity Correction ^b	,630	1	,427		
Likelihood Ratio	,970	1	,325		
Fisher's Exact Test				,340	,213
Linear-by-Linear Association	,967	1	,325		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 16,45.

b. Computed only for a 2x2 table

Table 3E: Chi-Square Test of Space Characteristics x Satisfaction Level – Independent Ones



satisfaction2 * cleanliness2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10,866 ^a	1	,001		
Continuity ~~Correction~~ ^b	9,120	1	,003		
Likelihood Ratio	9,437	1	,002		
Fisher's Exact Test				,002	,002
Linear-by-Linear Association	10,785	1	,001		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,04.

b. Computed only for a 2x2 table



satisfaction2 * phy_designstyle2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,804 ^a	1	,015		
Continuity ~~Correction~~ ^b	4,720	1	,030		
Likelihood Ratio	5,373	1	,020		
Fisher's Exact Test				,022	,018
Linear-by-Linear Association	5,850	1	,016		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,35.

b. Computed only for a 2x2 table

satisfaction2 * view2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9,614 ^a	1	,002		
Continuity ~~Correction~~ ^b	8,304	1	,004		
Likelihood Ratio	10,690	1	,001		
Fisher's Exact Test				,002	,001
Linear-by-Linear Association	9,542	1	,002		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 11,08.

b. Computed only for a 2x2 table

satisfaction2 * phy_color2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,056 ^a	1	,005		
Continuity ~~Correction^b~~	6,623	1	,010		
Likelihood Ratio	7,179	1	,007		
Fisher's Exact Test				,008	,007
Linear-by-Linear Association	7,996	1	,005		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,64.

b. Computed only for a 2x2 table

satisfaction2 * noiselevel2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,868 ^a	1	,005		
Continuity ~~Correction^b~~	6,513	1	,011		
Likelihood Ratio	7,136	1	,008		
Fisher's Exact Test				,010	,007
Linear-by-Linear Association	7,807	1	,005		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,45.

b. Computed only for a 2x2 table

satisfaction2 * productivity2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,273 ^a	1	,007		
Continuity ~~Correction^b~~	5,931	1	,015		
Likelihood Ratio	6,533	1	,011		
Fisher's Exact Test				,016	,010
Linear-by-Linear Association	7,219	1	,007		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,84.

b. Computed only for a 2x2 table

□

satisfaction2 * socialization2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,219 ^a	1	,007		
Continuity ~~Correction^b~~	6,088	1	,014		
Likelihood Ratio	7,164	1	,008		
Fisher's Exact Test				,009	,007
Linear-by-Linear Association	7,166	1	,007		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,88.

b. Computed only for a 2x2 table

satisfaction2 * security2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,470 ^a	1	,019		
Continuity ~~Correction^b~~	4,236	1	,040		
Likelihood Ratio	4,862	1	,027		
Fisher's Exact Test				,026	,024
Linear-by-Linear Association	5,430	1	,020		
N of Valid Cases	134				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,84.

b. Computed only for a 2x2 table

satisfaction2 * music2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	10,368 ^a	1	,001		
Continuity ~~Correction^b~~	8,752	1	,003		
Likelihood Ratio	9,200	1	,002		
Fisher's Exact Test				,003	,002
Linear-by-Linear Association	10,290	1	,001		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,84.

b. Computed only for a 2x2 table

satisfaction2 * amb_light2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	7,273 ^a	1	,007		
Continuity ~~Correction~~ ^b	5,931	1	,015		
Likelihood Ratio	6,533	1	,011		
Fisher's Exact Test				,016	,010
Linear-by-Linear Association	7,219	1	,007		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,84.

b. Computed only for a 2x2 table

satisfaction2 * air_quality2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9,467 ^a	1	,002		
Continuity ~~Correction~~ ^b	7,944	1	,005		
Likelihood Ratio	8,465	1	,004		
Fisher's Exact Test				,004	,004
Linear-by-Linear Association	9,396	1	,002		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,04.

b. Computed only for a 2x2 table

satisfaction2 * amb_view2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,709 ^a	1	,017		
Continuity ~~Correction~~ ^b	4,716	1	,030		
Likelihood Ratio	6,063	1	,014		
Fisher's Exact Test				,018	,013
Linear-by-Linear Association	5,666	1	,017		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 11,40.

b. Computed only for a 2x2 table

satisfaction2 * amb_noiselevel2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,635 ^a	1	,003		
Continuity ~~Correction~~ ^b	7,200	1	,007		
Likelihood Ratio	7,778	1	,005		
Fisher's Exact Test				,009	,005
Linear-by-Linear Association	8,571	1	,003		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,35.

b. Computed only for a 2x2 table

Table 4E: Chi-Square Test of Space Characteristics x Satisfaction Level – Not Independent Ones

satisfaction2 * menu2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,675 ^a	1	,055	,073	,052
Continuity ~~Correction^b~~	2,761	1	,097		
Likelihood Ratio	3,398	1	,065		
Fisher's Exact Test					
Linear-by-Linear Association	3,648	1	,056		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,35.

satisfaction2 * privacy2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,780 ^a	1	,052	,072	,044
Continuity ~~Correction^b~~	2,957	1	,086		
Likelihood Ratio	3,659	1	,056		
Fisher's Exact Test					
Linear-by-Linear Association	3,752	1	,053		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,87.

b. Computed only for a 2x2 table

satisfaction2 * creativity2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,428 ^a	1	,513	,575	,343
Continuity ~~Correction^b~~	,139	1	,709		
Likelihood Ratio	,410	1	,522		
Fisher's Exact Test					
Linear-by-Linear Association	,424	1	,515		
N of Valid Cases	134				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,84.

b. Computed only for a 2x2 table

satisfaction2 * workerbehavior2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,428 ^a	1	,513	,575	,343
Continuity ~~Correction^b~~	,139	1	,709		
Likelihood Ratio	,410	1	,522		
Fisher's Exact Test					
Linear-by-Linear Association	,424	1	,515		
N of Valid Cases	134				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 4,84.

b. Computed only for a 2x2 table

satisfaction2 * other_customers2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,515 ^a	1	,061		
Continuity ~~Correction^b~~	2,748	1	,097		
Likelihood Ratio	3,489	1	,062		
Fisher's Exact Test				,082	,049
Linear-by-Linear Association	3,489	1	,062		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 11,69.

b. Computed only for a 2x2 table

satisfaction2 * amb_color2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,165 ^a	1	,075		
Continuity ~~Correction^b~~	2,292	1	,130		
Likelihood Ratio	2,911	1	,088		
Fisher's Exact Test				,109	,069
Linear-by-Linear Association	3,141	1	,076		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 5,61.

b. Computed only for a 2x2 table

satisfaction2 * amb_designstyle2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,662 ^a	1	,197		
Continuity ~~Correction^b~~	1,075	1	,300		
Likelihood Ratio	1,572	1	,210		
Fisher's Exact Test				,213	,150
Linear-by-Linear Association	1,650	1	,199		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 6,45.

b. Computed only for a 2x2 table

Table 5E: Chi-Square Test of Space Characteristics x Recommendation Level –
Independent Ones

recommendation2 * light2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	17,042 ^a	1	,000		
Continuity Correction ^b	15,411	1	,000		
Likelihood Ratio	16,479	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	16,915	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,81.

b. Computed only for a 2x2 table

recommendation2 * furniture2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,544 ^a	1	,019		
Continuity Correction ^b	4,517	1	,034		
Likelihood Ratio	5,286	1	,021		
Fisher's Exact Test				,023	,018
Linear-by-Linear Association	5,503	1	,019		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,87.

b. Computed only for a 2x2 table

recommendation2 * layout2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	13,335 ^a	1	,000		
Continuity Correction ^b	11,927	1	,001		
Likelihood Ratio	12,965	1	,000		
Fisher's Exact Test				,001	,000
Linear-by-Linear Association	13,236	1	,000		
N of Valid Cases	134				

recommendation2 * cleanliness2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	25,964 ^a	1	,000		
Continuity ~~Correction~~ ^b	23,614	1	,000		
Likelihood Ratio	24,700	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	25,771	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 8,21.

b. Computed only for a 2x2 table

recommendation2 * phy_designstyle2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6,448 ^a	1	,011		
Continuity ~~Correction~~ ^b	5,388	1	,020		
Likelihood Ratio	6,176	1	,013		
Fisher's Exact Test				,016	,011
Linear-by-Linear Association	6,400	1	,011		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,18.

b. Computed only for a 2x2 table

recommendation2 * view2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9,084 ^a	1	,003		
Continuity ~~Correction~~ ^b	7,992	1	,005		
Likelihood Ratio	9,511	1	,002		
Fisher's Exact Test				,003	,002
Linear-by-Linear Association	9,016	1	,003		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 18,06.

b. Computed only for a 2x2 table

recommendation2 * phy_color2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6,901 ^a	1	,009		
Continuity ~~Correction~~ ^b	5,763	1	,016		
Likelihood Ratio	6,573	1	,010		
Fisher's Exact Test				,012	,009
Linear-by-Linear Association	6,849	1	,009		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,19.

b. Computed only for a 2x2 table

recommendation2 * privacy2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	12,564 ^a	1	,000		
Continuity ~~Correction~~ ^b	11,240	1	,001		
Likelihood Ratio	12,358	1	,000		
Fisher's Exact Test				,001	,000
Linear-by-Linear Association	12,470	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 15,76.

b. Computed only for a 2x2 table

recommendation2 * noiselevel2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	24,587 ^a	1	,000		
Continuity ~~Correction~~ ^b	22,494	1	,000		
Likelihood Ratio	23,533	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	24,403	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,51.

b. Computed only for a 2x2 table

recommendation2 * other_customers2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,723 ^a	1	,003		
Continuity Correction ^b	7,661	1	,006		
Likelihood Ratio	8,725	1	,003		
Fisher's Exact Test				,005	,003
Linear-by-Linear Association	8,658	1	,003		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 19,04.

b. Computed only for a 2x2 table

recommendation2 * music2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	21,906 ^a	1	,000		
Continuity Correction ^b	19,865	1	,000		
Likelihood Ratio	20,838	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	21,742	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,52.

b. Computed only for a 2x2 table

recommendation2 * amb_color2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	4,728 ^a	1	,030		
Continuity Correction ^b	3,796	1	,051		
Likelihood Ratio	4,525	1	,033		
Fisher's Exact Test				,041	,027
Linear-by-Linear Association	4,693	1	,030		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,19.

b. Computed only for a 2x2 table

recommendation2 * amb_light2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	21,906 ^a	1	,000		
Continuity Correction ^b	19,865	1	,000		
Likelihood Ratio	20,838	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	21,742	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,83.

b. Computed only for a 2x2 table

recommendation2 * air_quality2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	16,302 ^a	1	,000		
Continuity Correction ^b	14,569	1	,000		
Likelihood Ratio	15,500	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	16,180	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 9,83.

b. Computed only for a 2x2 table

recommendation2 * amb_view2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8,243 ^a	1	,004		
Continuity Correction ^b	7,209	1	,007		
Likelihood Ratio	8,560	1	,003		
Fisher's Exact Test				,005	,003
Linear-by-Linear Association	8,181	1	,004		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 18,72.

b. Computed only for a 2x2 table

recommendation2 * amb_noiselevel2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	26,590 ^a	1	,000		
Continuity Correction ^b	24,388	1	,000		
Likelihood Ratio	25,448	1	,000		
Fisher's Exact Test				,000	,000
Linear-by-Linear Association	26,392	1	,000		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,18.

b. Computed only for a 2x2 table

Table 6E: Chi-Square Test of Space Characteristics x Recommendation Level – Not Independent Ones

recommendation2 * menu2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,631 ^a	1	,427		
Continuity Correction ^b	,332	1	,564		
Likelihood Ratio	,619	1	,431		
Fisher's Exact Test				,514	,279
Linear-by-Linear Association	,626	1	,429		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,18.

b. Computed only for a 2x2 table

recommendation2 * creativity2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,288 ^a	1	,591		
Continuity Correction ^b	,088	1	,766		
Likelihood Ratio	,284	1	,594		
Fisher's Exact Test				,635	,377
Linear-by-Linear Association	,286	1	,593		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 7,88.

b. Computed only for a 2x2 table

recommendation2 * workerbehavior2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,240 ^a	1	,135		
Continuity Correction ^b	1,579	1	,209		
Likelihood Ratio	2,152	1	,142		
Fisher's Exact Test				,154	,106
Linear-by-Linear Association	2,223	1	,136		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 7,88.

recommendation2 * amb_designstyle2

Chi-Square Tests

	Value	df	~~Asymp.~~ Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	2,271 ^a	1	,132		
Continuity Correction ^b	1,667	1	,197		
Likelihood Ratio	2,204	1	,138		
Fisher's Exact Test				,138	,099
Linear-by-Linear Association	2,254	1	,133		
N of Valid Cases	134				

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 10,51.

b. Computed only for a 2x2 table.

Appendix F

Table 1F: Regression Test of the Independent Space Characteristics x Place Rating
Level

Regression			
Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	productivity2	.	Stepwise (Criteria: Probability-of-F- to-enter $\leq .050$ Probability-of-F- to-remove $\geq .100$).
2	view2	.	Stepwise (Criteria: Probability-of-F- to-enter $\leq .050$ Probability-of-F- to-remove $\geq .100$).

a. Dependent Variable: place2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,353 ^a	,125	,118	,84986
2	,403 ^b	,163	,150	,83435

a. Predictors: (Constant), productivity2

b. Predictors: (Constant), productivity2, view2

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13,558	1	13,558	18,771	,000 ^b
	Residual	95,338	132	,722		
	Total	108,896	133			

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,441	,240		5,998	,000
	productivity2	,386	,089	,353	4,333	,000
2	(Constant)	1,268	,246		5,146	,000
	productivity2	,321	,091	,293	3,512	,001
	view2	,187	,077	,204	2,440	,016

a. Dependent Variable: place2

Excluded Variables^a

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
					Tolerance
1	light2	,102 ^b	1,081	,282	,094
	layout2	,053 ^b	,598	,551	,052
	cleanliness2	,188 ^b	1,808	,073	,156
	view2	,204 ^b	2,440	,016	,208
	phy_color2	,163 ^b	1,812	,072	,156
	menu2	,131 ^b	1,576	,117	,136
	socialization2	,158 ^b	1,700	,092	,147
	security2	,140 ^b	1,306	,194	,113
	amb_color2	,062 ^b	,679	,498	,059
	amb_light2	,168 ^b	1,718	,088	,148
	air_quality2	,094 ^b	,966	,336	,084
	amb_view2	,163 ^b	1,871	,064	,161
	amb_noiselevel2	,063 ^b	,630	,530	,055
	phy_designstyle2	,148 ^b	1,736	,085	,150
	privacy2	-,013 ^b	-,129	,897	-,011
	noiselevel2	,007 ^b	,064	,949	,006
	music2	-,008 ^b	-,082	,935	-,007
2	light2	,053 ^c	,559	,577	,049
	layout2	-,027 ^c	-,294	,769	-,026
	cleanliness2	,136 ^c	1,285	,201	,112
	phy_color2	,121 ^c	1,331	,185	,116
	menu2	,077 ^c	,895	,372	,078
	socialization2	,117 ^c	1,247	,215	,109
	security2	,087 ^c	,807	,421	,071
	amb_color2	,034 ^c	,373	,709	,033
	amb_light2	,133 ^c	1,365	,175	,119
	air_quality2	,044 ^c	,445	,657	,039
	amb_view2	,006 ^c	,042	,967	,004
	amb_noiselevel2	,030 ^c	,299	,765	,026
	phy_designstyle2	,091 ^c	1,019	,310	,089
	privacy2	-,047 ^c	-,486	,628	-,043
	noiselevel2	-,029 ^c	-,278	,781	-,024
	music2	-,060 ^c	-,603	,547	-,053

a. Dependent Variable: place2

b. Predictors in the Model: (Constant), productivity2

c. Predictors in the Model: (Constant), productivity2, view2

Table 2F: Regression Test of the Independent Space Characteristics x Satisfaction Level

Regression			
Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	cleanliness2		Stepwise (Criteria: Probability-of-F- to-enter $\leq .050$ Probability-of-F- to-remove $\geq .100$).
2	view2		Stepwise (Criteria: Probability-of-F- to-enter $\leq .050$ Probability-of-F- to-remove $\geq .100$).

a. Dependent Variable: satisfaction2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,285 ^a	,081	,074	,77482
2	,335 ^b	,112	,099	,76439

a. Predictors: (Constant), cleanliness2

b. Predictors: (Constant), cleanliness2, view2

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6,993	1	6,993	11,649	,001 ^b
	Residual	79,246	132	,600		
	Total	86,239	133			
2	Regression	9,697	2	4,849	8,298	,000 ^a
	Residual	76,542	131	,584		
	Total	86,239	133			

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,827	,235		7,761	,000
	cleanliness2	,293	,086	,285	3,413	,001
2	(Constant)	1,730	,237		7,315	,000
	cleanliness2	,223	,091	,216	2,451	,016
	view2	,155	,072	,190	2,151	,033

a. Dependent Variable: satisfaction2

Excluded Variables^a

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
						Tolerance
1	light2	,130 ^b	1,278	,204	,111	,665
	layout2	,095 ^b	,960	,339	,084	,704
	view2	,190 ^b	2,151	,033	,185	,870
	phy_color2	,163 ^b	1,831	,069	,158	,866
	productivity2	,088 ^b	,818	,415	,071	,600
	socialization2	,135 ^b	1,472	,143	,128	,818
	security2	-,047 ^b	-,355	,723	-,031	,399
	amb_light2	,074 ^b	,647	,519	,056	,539
	air_quality2	,146 ^b	1,380	,170	,120	,621
	amb_view2	,116 ^b	1,297	,197	,113	,861
	amb_noiselevel2	,130 ^b	1,245	,215	,108	,640
	furniture2	,121 ^b	1,341	,182	,116	,855
	phy_designstyle2	,130 ^b	1,483	,140	,129	,893
	privacy2	,053 ^b	,563	,574	,049	,805
	noiselevel2	,125 ^b	1,262	,209	,110	,708
	music2	,176 ^b	1,788	,076	,154	,709
2	light2	,097 ^c	,950	,344	,083	,647
	layout2	,035 ^c	,338	,736	,030	,640
	phy_color2	,128 ^c	1,419	,158	,124	,827
	productivity2	,069 ^c	,643	,521	,056	,596
3	socialization2	,162 ^c	1,097	,274	,096	,788
	security2	-,082 ^c	-,622	,535	-,054	,393
	amb_light2	,058 ^c	,511	,610	,045	,537
	air_quality2	,113 ^c	1,066	,288	,093	,605
	amb_view2	-,063 ^c	-,466	,642	-,041	,373
	amb_noiselevel2	,112 ^c	1,087	,279	,095	,635
	furniture2	,094 ^c	1,042	,299	,091	,836
	phy_designstyle2	,081 ^c	,884	,378	,077	,810
	privacy2	,026 ^c	,276	,783	,024	,790
	noiselevel2	,161 ^c	1,025	,307	,089	,698
	music2	,144 ^c	1,459	,147	,127	,689

a. Dependent Variable: satisfaction2

b. Predictors in the Model: (Constant), cleanliness2

c. Predictors in the Model: (Constant), cleanliness2, view2

Table 3F: Regression Test of the Independent Space Characteristics x Recommendation
Level

Regression			
Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	security2	.	Stepwise (Criteria: Probability-of-F- to-enter $\leq .050$ Probability-of-F- to-remove $\geq .100$).
2	socialization2	.	Stepwise (Criteria: Probability-of-F- to-enter $\leq .050$ Probability-of-F- to-remove $\geq .100$).
3	amb_noiselevel2	.	Stepwise (Criteria: Probability-of-F- to-enter $\leq .050$ Probability-of-F- to-remove $\geq .100$).

a. Dependent Variable: recommendation2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,461 ^a	,212	,206	,83985
2	,517 ^b	,267	,256	,81311
3	,538 ^c	,290	,273	,80358

a. Predictors: (Constant), security2

b. Predictors: (Constant), security2, socialization2

c. Predictors: (Constant), security2, socialization2, amb_noiselevel2

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	25,103	1	25,103	35,589	,000 ^b
	Residual	93,106	132	,705		
	Total	118,209	133			
2	Regression	31,598	2	15,799	23,896	,000 ^c
	Residual	86,611	131	,661		
	Total	118,209	133			
3	Regression	34,262	3	11,421	17,686	,000 ^d
	Residual	83,947	130	,646		
	Total	118,209	133			

a. Dependent Variable: recommendation2

b. Predictors: (Constant), security2

c. Predictors: (Constant), security2, socialization2

d. Predictors: (Constant), security2, socialization2, amb_noiselevel2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	,852	,260		3,275	,001
	security2	,564	,095	,461	5,966	,000
2	(Constant)	,713	,256		2,787	,006
	security2	,403	,105	,329	3,841	,000
	socialization2	,257	,082	,269	3,134	,002
3	(Constant)	,557	,264		2,106	,037
	security2	,303	,115	,248	2,641	,009
	socialization2	,198	,086	,207	2,294	,023
	amb_noiselevel2	,217	,107	,195	2,031	,044

a. Dependent Variable: recommendation2

Excluded Variables*

Model	Beta In	t	Sig.	Partial Correlation	Collinearity Statistics
					Tolerance
1	light2	,179 ^b	2,068	,041	,178
	layout2	,102 ^b	1,129	,261	,098
	cleanliness2	,208 ^b	1,711	,090	,148
	view2	,113 ^b	1,373	,172	,119
	phy_color2	,103 ^b	1,286	,201	,112
	productivity2	,180 ^b	1,785	,077	,154
	socialization2	,269 ^b	3,134	,002	,264
	amb_color2	,038 ^b	,462	,645	,040
	amb_light2	,198 ^b	2,065	,041	,178
	air_quality2	,118 ^b	1,238	,218	,108
	amb_view2	,003 ^b	1,126	,262	,098
	amb_noiselevel2	,270 ^b	2,940	,004	,249
	furniture2	,025 ^b	,293	,770	,026
	phy_designstyle2	,047 ^b	,556	,579	,049
	privacy2	,009 ^b	1,113	,268	,097
	noiselevel2	,248 ^b	2,725	,007	,232
	other_customers2	,129 ^b	1,602	,112	,139
	music2	,198 ^b	2,065	,041	,178
2	light2	,123 ^a	1,419	,158	,124
	layout2	,075 ^a	,855	,394	,075
	cleanliness2	,177 ^a	1,497	,137	,130
	view2	,071 ^a	,877	,382	,077
	phy_color2	,018 ^a	,219	,827	,019
	productivity2	,107 ^a	1,046	,297	,091
	amb_color2	-,024 ^a	-,292	,771	-,026
	amb_light2	,151 ^a	1,590	,114	,138
	air_quality2	,061 ^a	,638	,525	,056
	amb_view2	,064 ^a	,786	,433	,069
	amb_noiselevel2	,195 ^a	2,031	,044	,175
	furniture2	-,012 ^a	-,144	,886	-,013
	phy_designstyle2	-,014 ^a	-,163	,871	-,014
	privacy2	,023 ^a	,248	,805	,022
	noiselevel2	,167 ^a	1,731	,086	,150

	other_customers2	,046 ^a	,539	,591	,047	,790
	music2	,112 ^a	1,122	,264	,098	,562
3	light2	,065 ^d	,699	,486	,061	,625
	layout2	,048 ^d	,541	,589	,048	,700
	cleanliness2	,118 ^d	,962	,338	,084	,363
	view2	,064 ^d	,799	,426	,070	,849
	phy_color2	-,009 ^d	-,106	,915	-,009	,780
	productivity2	,059 ^d	,565	,573	,050	,501
	amb_color2	-,031 ^d	-,376	,707	-,033	,834
	amb_light2	,102 ^d	1,028	,306	,090	,557
	air_quality2	-,023 ^d	-,221	,826	-,019	,515
	amb_view2	,044 ^d	,545	,587	,048	,842
	furniture2	-,031 ^d	-,374	,709	-,033	,816
	phy_designstyle2	-,014 ^d	-,172	,863	-,015	,801
	privacy2	-,011 ^d	-,123	,902	-,011	,661
	noiselevel2	,062 ^d	,472	,637	,042	,314
	other_customers2	,001 ^d	,010	,992	,001	,735
	music2	,064 ^d	,629	,531	,055	,525

a. Dependent Variable: recommendation2

b. Predictors in the Model: (Constant), security2

c. Predictors in the Model: (Constant), security2, socialization2

d. Predictors in the Model: (Constant), security2, socialization2, amb_noiselevel2